Issue 123
PS
1963 Series
THE PREVENTIVE MAINTENANCE MONTHLY
...REALLY??? WHAT'S PREVENTIVE MAINTENANCE??
ATLANTIS
WELCOME TO ATLANTIS GREATEST ISLAND KINGDOM IN MYTHOLOGY
OPTIMISTS CLUB EVERY WED.
SPECIAL FEATURE SUPPLY MANUALS
(SEE PAGE 2)

Maintenance... little things... big things...

BABY SHOES

How many shoes do you need for each track of your M88 tank recovery vehicle? The latest dope is that there should be 84 shoes on each track, the number most vehicles have when they're issued. You can add or take out a shoe to adjust so you get the right track tension as TM 9-2320-222-10 (Nov 60) tells you on page 93.

SPURS

You say you've got trouble with your climbing irons, FSN 4240-273-9668, because the buckle holes in the leg and ankle straps stretch and tear? Then shape 'em up by inserting metallic eyelets in those buckle holes. Aluminum eyelet FSN 5325-221-1527, listed in SM 9-1-C5325-SL-1, is available through your regular Ordnance supply channels.

BUG JUICE

A new name, a new FSN, and a different tech service is the story on liquid fungicide, FSN 6840-174-9655 (Chem). To get a 5-gal can you now ask for Varnish, oil, MIL-V-173, FSN 8010-174-9655, and you get it from the Engineers.

BATTERIES

Thinking about giving your portable radio set some sack time? Like for a day or more? Then don't forget to take out the battery first so there won't be any chance of battery fumes or acid fouling up the inside of the set.

BIRDS

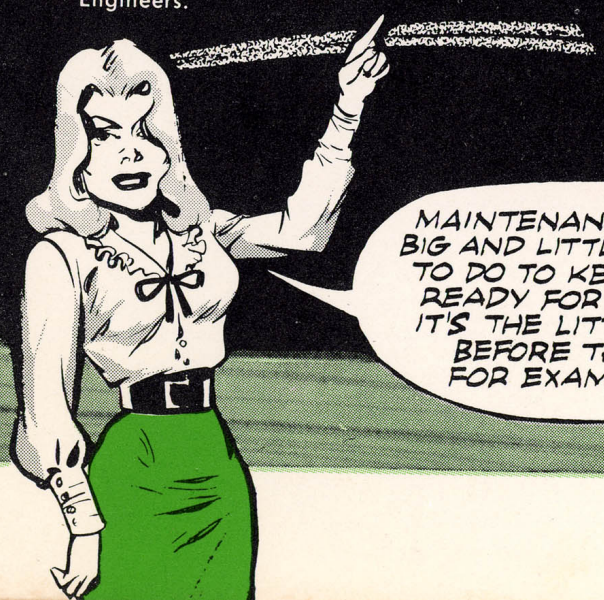
If the ones in the elevation and azimuth drive units on your Hawk AN/MPQ-33 and 34 radar sets are, tighten 'em. And keep checking the screws—like when you're pulling maintenance—to make sure that they're still tight.

BOLTS

Some cargo truck drivers make with too much muscle when they tighten the bolts on the troop seats and racks. Too tight is not right on account of the bolts bite into the boards and crack 'em. Snug tight is all you need. Save the muscle for other things.

PUBLICATIONS

If you maintain medical equipment, then you'll be interested in TM 8-605 (Oct 61), "Organizational Maintenance of Medical Equipment."



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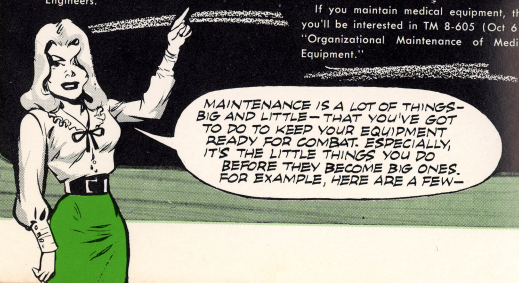

especially the little ones

JEEPS

Like it says on page 63 of TM 2300-223-20P (Mar 62), you stock only the distributor that wears FSN 2920-294-3742 for G740 and G758-series Jeeps. This replaces the **one** listed in TM 9-2320-208-20P (Feb 59) and **two** listed in the old MPLL. For the G741-series ¾-tonners you stock only Distributor, FSN 2920-294-3685 listed in TM 9-2320-212-20P (Feb 60).

MISSILES

Don't waste your time trying to find out what happened to two preformed packings that're supposed to come to your Nike-Hercules site as part of the kit for MWO 9-1450-250-20/2. The packings were left out of some kits by mistake. But you can get the packings by shooting the word up the supply line that you need 'em. They come under FSN 5330-682-4530.

PIN-UP?

Looking for some real useful pin-ups? Get hold of SM 10-4-5180-A14 (31 Jan 62). It gives you a breakdown of the Saddler's Tool Kit (FSN 5180-754-0731)—with pictures, yet!

It all adds up

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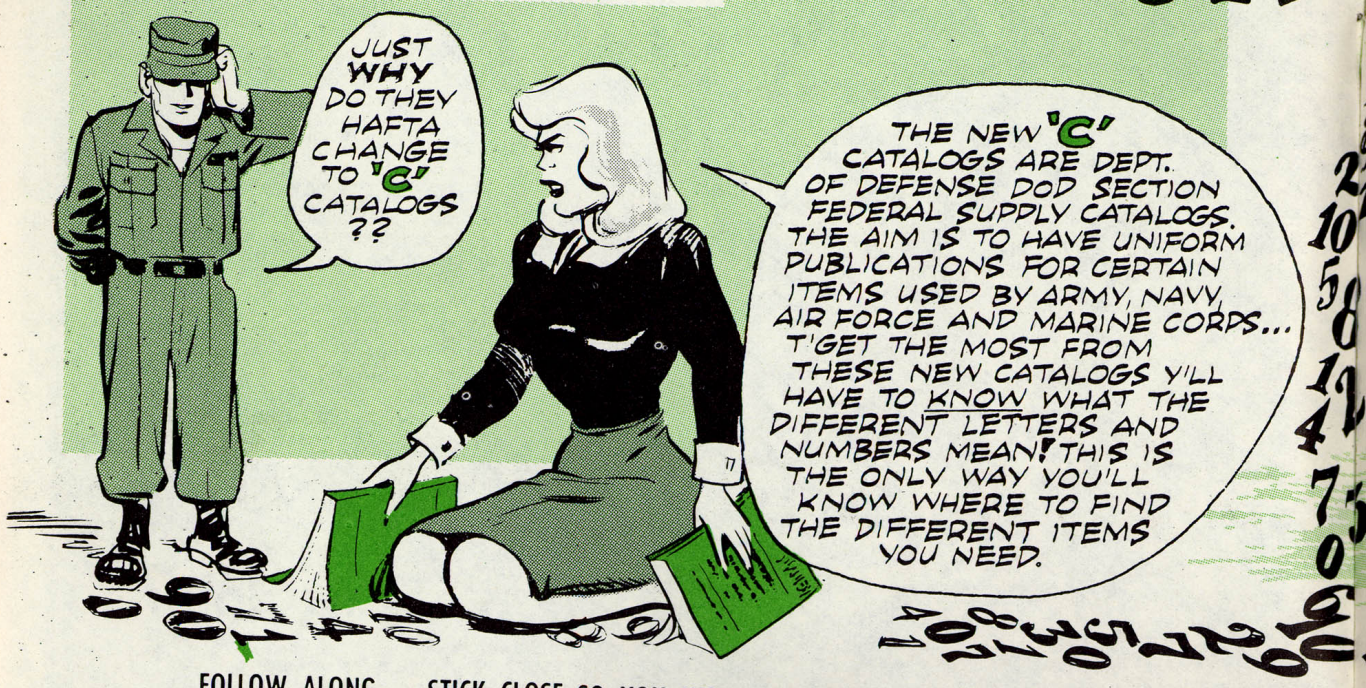
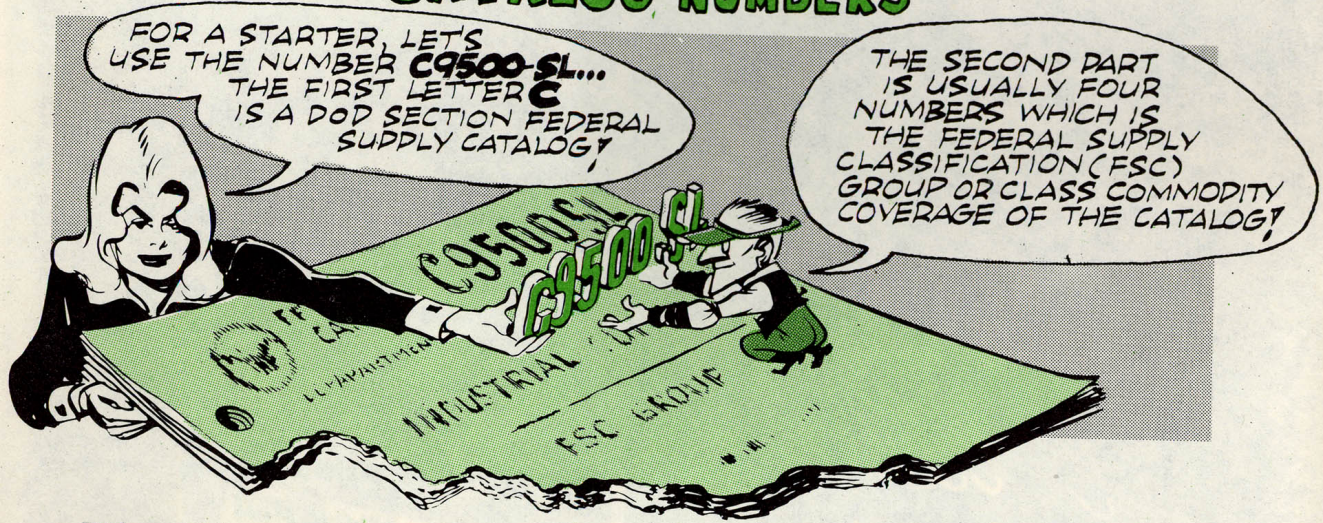
YOUR



FOLLOW ALONG . . . STICK CLOSE SO YOU WON'T GET LOST.

CATALOG NUMBERS



When the catalog covers a complete FSC Group, you'll find two zeros after the group number. For instance, C9500 would be a DoD Section Federal Supply Catalog for everything in FSC Group 95. Or, you may have a catalog for a single class (C5307 would be a DoD Section Federal Supply Catalog for the FSC Class 5307 only).

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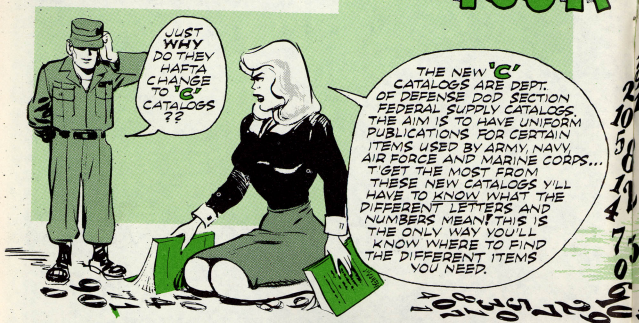

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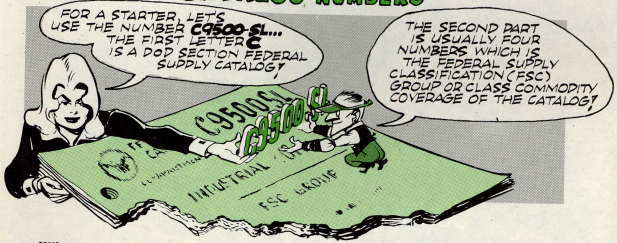

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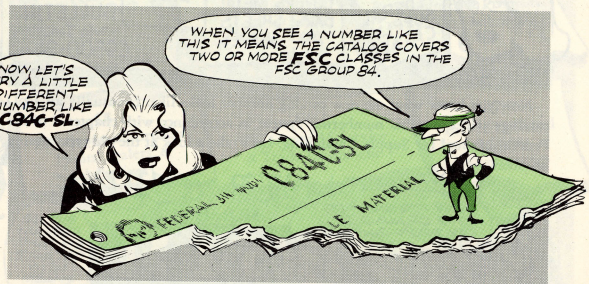
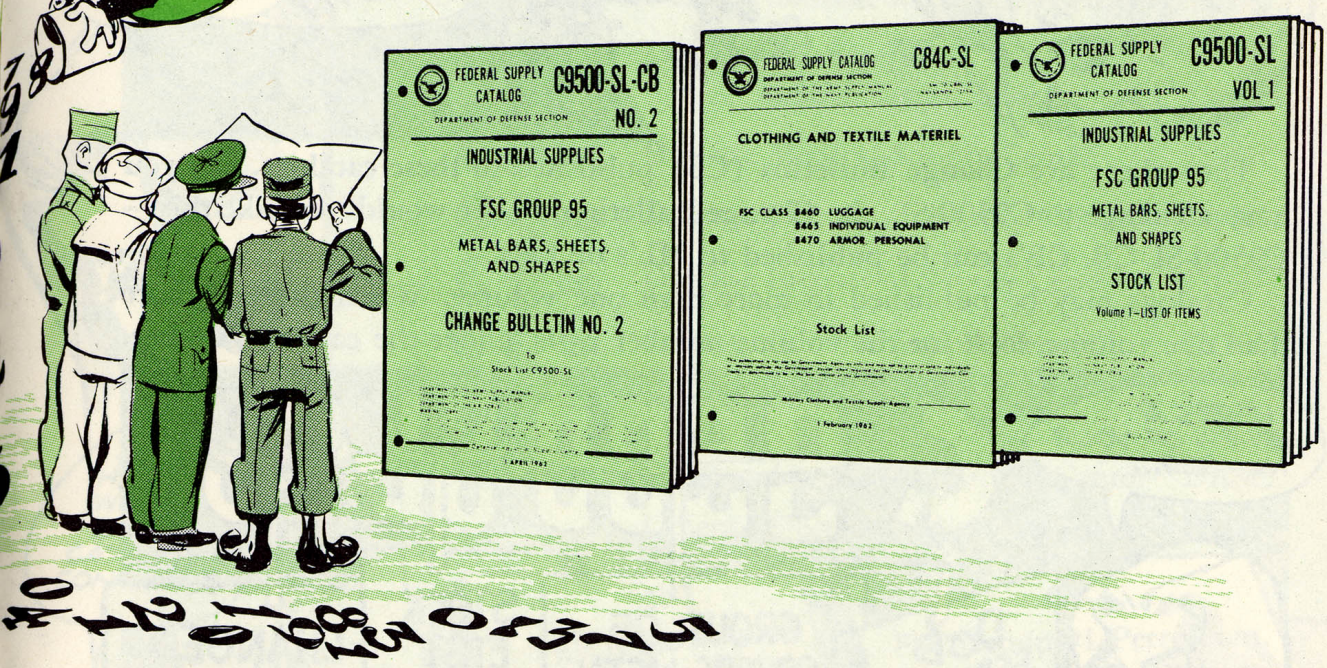
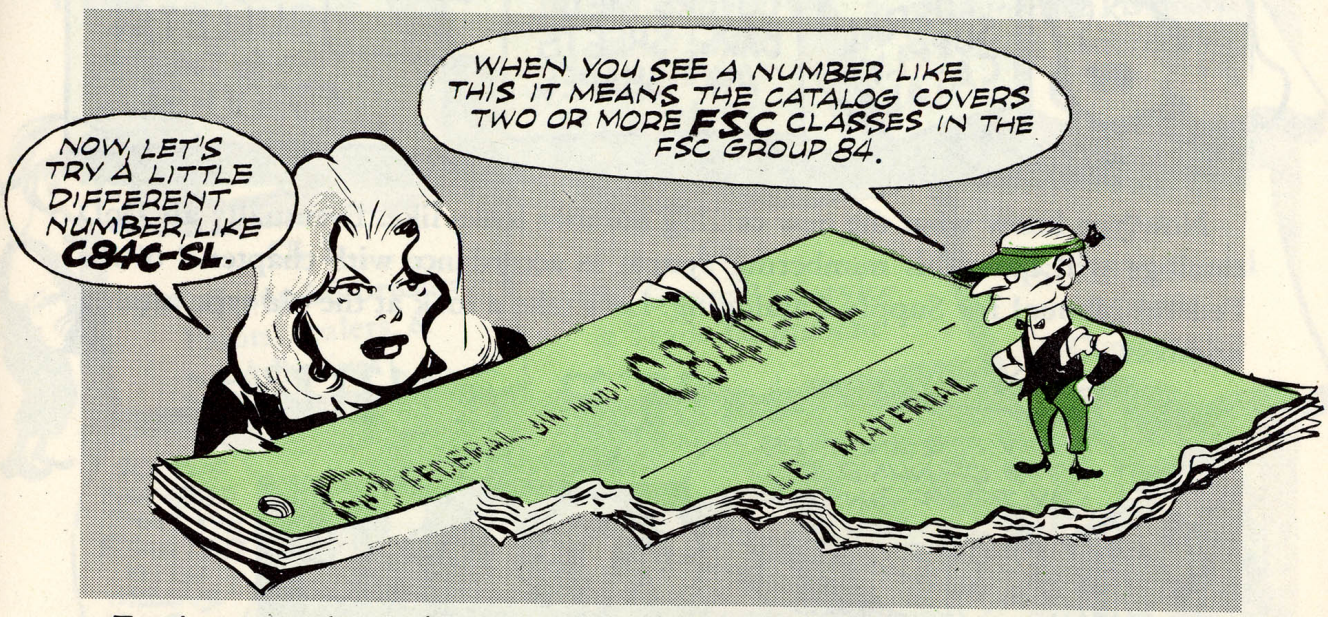


For instance, the C84C-SL consists of FSC Classes 8460, 8465, and 8470. It does not cover **all** the classes in FSC 84 group. It does not include 8405, 8415, 8450, etc. The C after 84 does not mean anything except that it tells you there is a consolidation of classes. (You may see an A, B, C, etc. after the group when there is a consolidation of classes.)

MORE

"C" SCORESHEET





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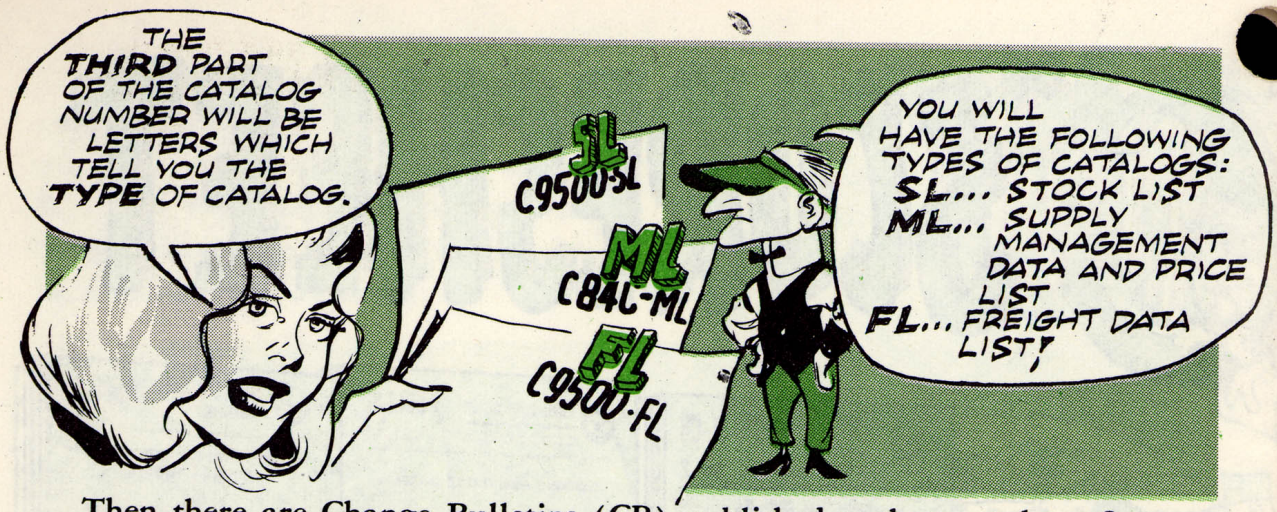
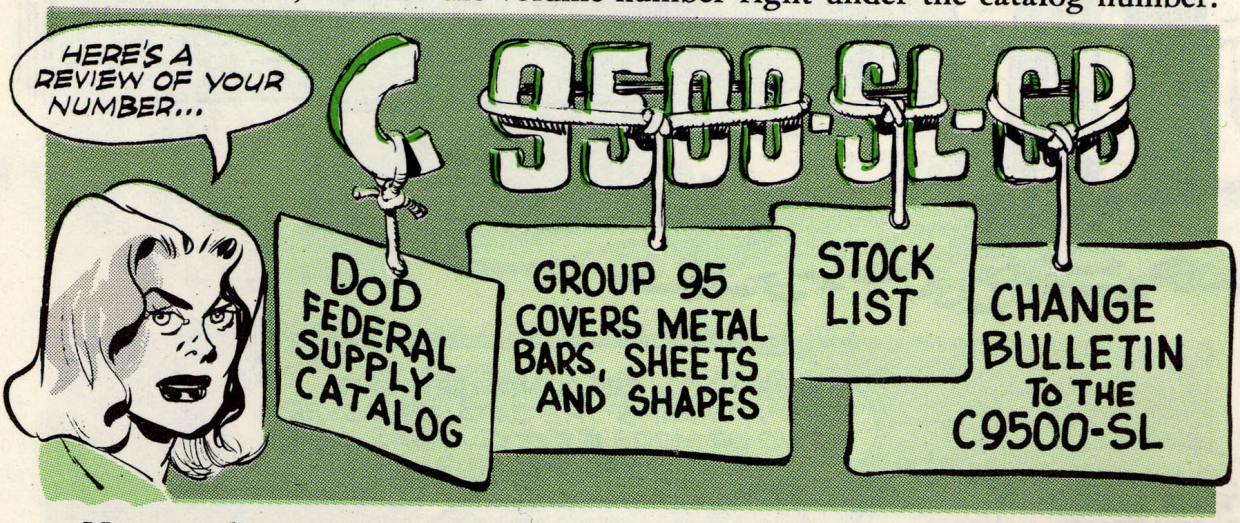
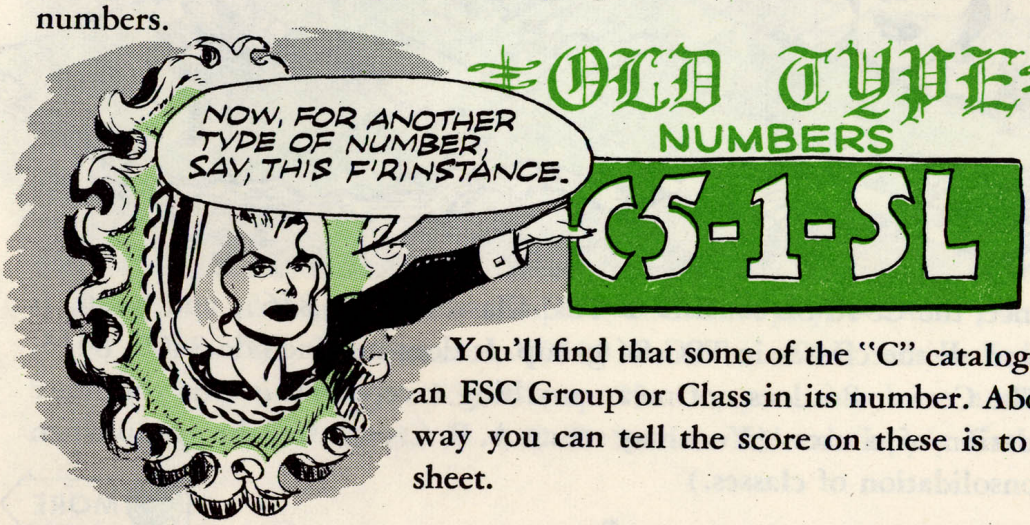


Then there are Change Bulletins (CB) published to these catalogs. Say you have a change to C9500-SL, the Change Bulletin number would look like this—C9500-SL-CB. CB's can be published to ML's or FL's.

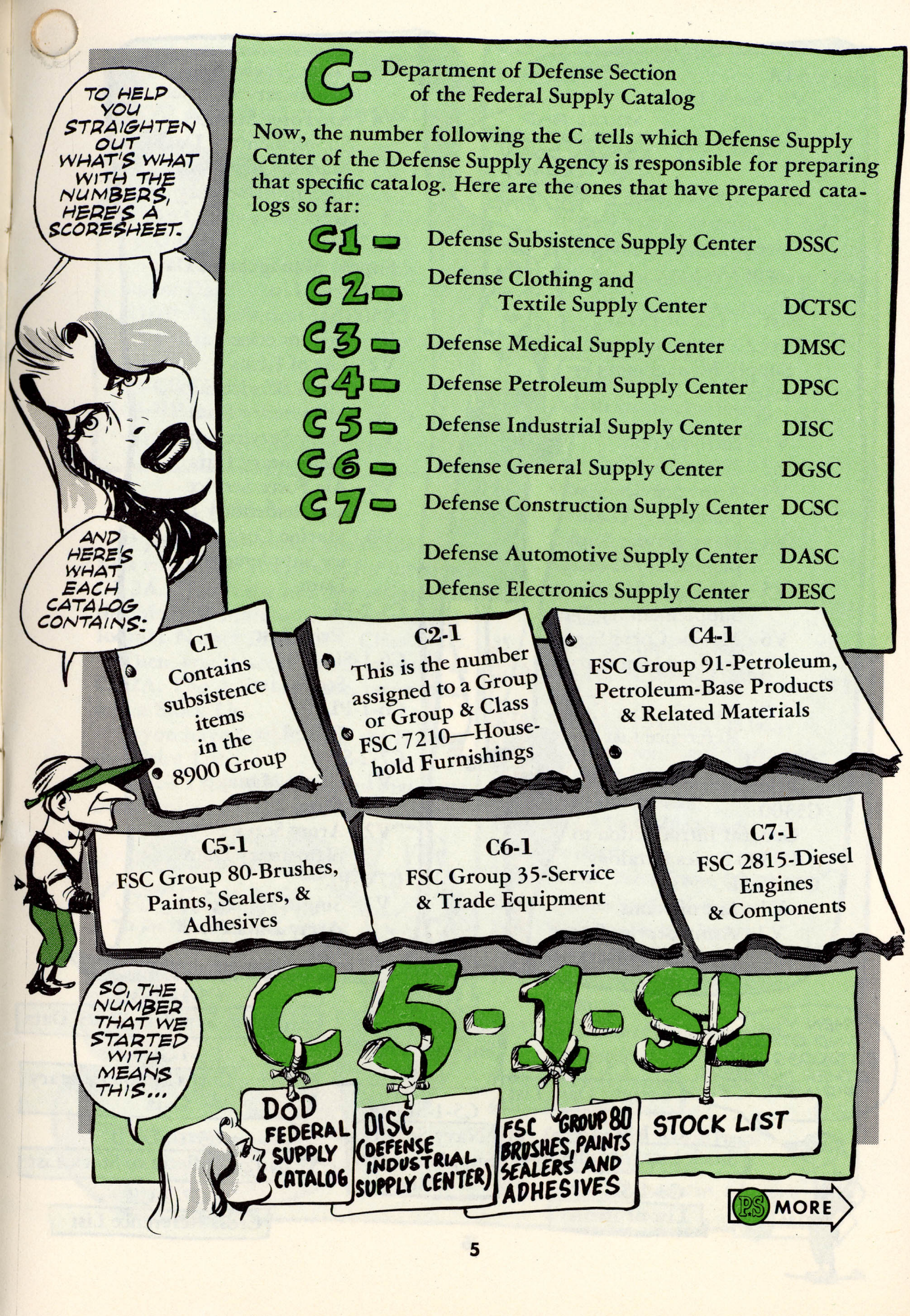
Catalogs may be published in more than one volume. When there is more than one volume, look for the volume number right under the catalog number.



Now you know what the new catalog number looks like. Eventually all DoD catalogs will have this numbering system in accordance with chapter 7 of the Federal Manual for Supply Cataloging. Let's take a look at the old type catalog numbers.



You'll find that some of the "C" catalogs don't have an FSC Group or Class in its number. About the only way you can tell the score on these is to get a score sheet.


TO HELP YOU STRAIGHTEN OUT WHAT'S WHAT WITH THE NUMBERS, HERE'S A SCORESHEET.
AND HERE'S WHAT EACH CATALOG CONTAINS:
C- Department of Defense Section of the Federal Supply Catalog
Now, the number following the C tells which Defense Supply Center of the Defense Supply Agency is responsible for preparing that specific catalog. Here are the ones that have prepared catalogs so far:
C1- Defense Subsistence Supply Center DSSC
C2- Defense Clothing and Textile Supply Center DCTSC
C3- Defense Medical Supply Center DMSC
C4- Defense Petroleum Supply Center DPSC
C5- Defense Industrial Supply Center DISC
C6- Defense General Supply Center DGSC
C7- Defense Construction Supply Center DCSC
Defense Automotive Supply Center DASC
Defense Electronics Supply Center DESC
C1 Contains subsistence items in the 8900 Group
C2-1 This is the number assigned to a Group or Group & Class FSC 7210—Household Furnishings
C4-1 FSC Group 91-Petroleum, Petroleum-Base Products & Related Materials
C5-1 FSC Group 80-Brushes, Paints, Sealers, & Adhesives
C6-1 FSC Group 35-Service & Trade Equipment
C7-1 FSC 2815-Diesel Engines & Components
SO, THE NUMBER THAT WE STARTED WITH MEANS THIS...
C-5-1-SL
DOD FEDERAL SUPPLY CATALOG
DISC (DEFENSE INDUSTRIAL SUPPLY CENTER)
FSC GROUP 80 BRUSHES, PAINTS SEALERS AND ADHESIVES
STOCK LIST
P.S MORE

C2-1A
VI - Stock List
C2-1-PL
Price List
C3-2
FSC 6505
C3-14
Price & Supply Management Data
C4-1
Part 1 - List of Items
Part 2 - Supplementary Supply Management Data
C5-1-SL
V1 - Introduction
V2 - List of Items
V3 - Army Service Supplementary Data
V4 - Navy Service Supplementary Data
V5 - Air Force Service Supplementary Data
V6 - Marine Corps Service Supplementary Data
V7 - Part Number Cross Reference List
C5-1-PL
Price List
C5300
General Introduction to C5300 Series Catalogs
C5320-SL
V1 - List of Items
V2 - Army Service Supplementary Data

YOU'LL FIND SOME CATALOGS BROKEN DOWN INTO "VOLUMES"... HERE'S WHAT YOU FIND.

V3 - Navy Service Supplementary Data
V4 - Air Force Service Supplementary Data
V5 - Marine Corps Service Supplementary Data
C5320-ML
Supply Management Data and Price List
C9500-SL
V1 - Introduction
V2 - List of Items
V3 - Army Service Supplementary Data
V4 - Navy Service Supplementary Data
V5 - Air Force Service Supplementary Data
V6 - Marine Corps Service Supplementary Data
C5-2-PL
Price List
C6-1-SL
Stock List
C6-1-PL
Price List
C7-2-SL
V1 - Single Manager Data
V2 - Army Service Supplementary Data
C7-2-PL
V1 - Single Manager & Army Data Price List

THEN Y'LL FIND OTHER CATALOGS WITH OTHER NUMBERS. F'RINSTANCE:

C5-1-FL
Freight Data List

C5-1-SL-V1
Stock List Introduction

C5-1-SL-V2
List of Items

C5-1-SL-V3
Army Service Supplementary Data

C5-1-SL-V4
Navy Service Supplementary Data

C5-1-SL-V5
Air Force Supplementary Data

C5-1-SL-V6
Marine Corps Supplementary Data

C5-1-SL-CB
Change Bulletin to Stock List

C7-2-CR
Cross Reference List

C3-13 Components of Sets, Kits & Outfits
C3-14 Price & Supply Management Data
C3-16 Alphabetical Index
C3-17 Medical Materiel Substitution List
C3-CB Change Bulletin
*C3-RP Repair Parts Pamphlets
*(Not for general distribution)

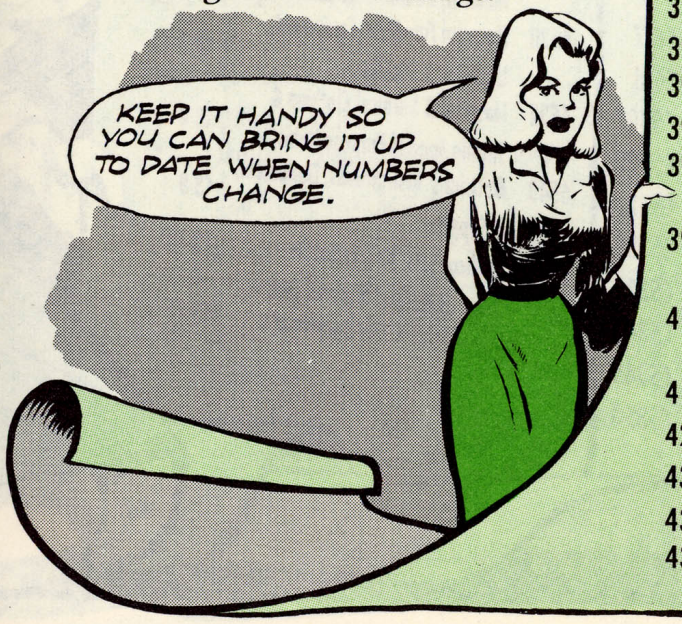
Odd Numbers

If you don't watch, some of the numbers will throw you. Take, for instance, C3-2A. That is the number assigned to the Medical Materiel Glossary of Colloquial Names in the FSC Class 6505.

Then you'll see a number such as C2-2A. The A, in this case, means that it is a Stock List.

If you have C2-2B, then the B is for the Price List.

Here's a list of FSC Classes that have been assigned "C" catalogs.



FSC CLASSES		C-NUMBER
2520	Vehicular Power Transmission Components	C2520
2530	Vehicular Brake, Steering, Axle Wheel, & Track Components	C2530
2540	Vehicular Furniture & Accessories	C2540
2590	Miscellaneous Vehicular Components	C2590
2610	Tires & Tubes, Pneumatic, except Aircraft	C26A
2630	Tires, Solid & Cushion	
2640	Tire Rebuilding & Tire & Tube Repair	
2805	Gasoline Reciprocating Engines, except Aircraft; & Components	C2805
2815	Diesel Engines & Components	C7-1
2910	Engine Fuel System Components, Nonaircraft	C2910
2930	Engine Cooling System Components, Nonaircraft	C2930
2990	Miscellaneous Accessories, Nonaircraft	C2990
35	Service and Trade Equipment	C6-1
3740	Pest, Disease, and Frost Control Equipment	C7-2
3750	Gardening Implements and Tools	
3815	Crane and Crane-Shovel Attachments	C7-3
3820	Mining, Rock Drilling, Earth Boring, & Related Equipment	
3830	Truck & Tractor Attachments	
3910	Conveyors	C7-4
3950	Winches, Hoists, Cranes, & Derricks	
3920	Materials Handling Equipment	C6-2
3930	Warehouse Trucks & Tractors, Self-Propelled	
3990	Miscellaneous Materials Handling Equipment	
4110	Self-Contained Refrigeration Units & Accessories	C6-3
4140	Fans & Air Circulators, Nonindustrial	
4210	Fire Fighting Equipment	C7-5
4310	Compressors & Vacuum Pumps	C7-6
4320	Power & Hand Pumps	C7-7
4330	Centrifugals, Separators, & Pressure & Vacuum Filters	

P.S. MORE

FSC CLASSES		C-NUMBER
4510	Plumbing Fixtures & Accessories	
4520	Space Heating Equipment & Domestic Water Heaters	C7-8
4530	Fuel Burning Equipment Units	
4540	Miscellaneous Plumbing, Heating, & Sanitation Equipment	
4610	Water Purification Equipment	
4620	Water Distillation Equipment, Marine & Industrial	C7-9
4630	Sewage Treatment Equipment	
4710	Pipe and Tube	C7-10
4720	Hose & Tubing, Flexible	C7-11
4730	Fittings & Specialties: Hose, Pipe, and Tube	C7-12
4810	Valves Powered	
4820	Valves, Nonpowered	C7-13
5110	Hand Tools, Edged, Nonpowered	C6-4
5120	Hand Tools, Nonedged, Nonpowered	C6-5
5130	Hand Tools, Power Driven	
5133	Drill Bits, Counterbores, and Countersinks: Hand & Machine	
5136	Taps, Dies, and Collets: Hand & Machine	C6-6
5140	Tool & Hardware Boxes	
5180	Sets, Kits, & Outfits of Hand Tools	C6-7
5210	Measuring Tools, Craftsman	C6-8
5307	Studs	C5307
5320	Rivets	C5320
5325	Fastening Devices	C5325
5330	Packing & Gasket Materials	C5330
5335	Metal Screening	C5335
5340	Miscellaneous Hardware	C5340
5345	Disks and Stones, Abrasive	C5345
5350	Abrasive Materials	C5350

FSC CLASSES		C-NUMBER
5355	Knobs and Pointers	C5355
5410	Prefab & Portable Bldgs	
5440	Scaffolding Equipment & Concrete Forms	C7-14
5450	Miscellaneous Prefab Structures	
5510	Lumber	
5520	Millwork	C7-15
5530	Plywood & Veneer	
5610	Mineral Construction Materials, Bulk	
5620	Bldg Glass, Tile, Brick & Block	
5630	Pipe & Conduit, Nonmetallic	
5640	Wallboard, Bldg Paper, & Thermal Insulation Material	C7-16
5650	Roofing & Siding Material	
5660	Fencing, Fences & Gates	
5670	Architectural & Related Metal Products	
5680	Miscellaneous Construction Material	
6505	Drugs, Biologicals & Official Reagents	C3-2
6510	Surgical Dressing Materials	C3-3
6515	Medical & Surgical Instruments, Equipment & Supplies	C3-4
6520	Dental Instruments, Equipment & Supplies	C3-5
6525	X-Ray Equipment & Supplies: Medical, Dental, Veterinary	C3-6
6530	Hospital Furniture, Equipment, Utensils, & Supplies	C3-7
6532	Hospital & Surgical Clothing & Textile Special Purpose Items	C3-8
6540	Opticians' Instruments, Equipment, & Supplies	C3-9
6545	Medical Sets, Kits, & Outfits	C3-10
66	Items of Medical Materiel Only—Instruments & Lab Equipment	C3-11

FSC CLASSES		C-NUMBER
4510	Plumbing Fixtures & Accessories	C-7-8
4520	Space Heating Equipment & Domestic Water Heaters	
4530	Fuel Burning Equipment Units	
4540	Miscellaneous Plumbing, Heating, & Sanitation Equipment	
4610	Water Purification Equipment	C7-9
4620	Water Distillation Equipment, Marine & Industrial	
4630	Sewage Treatment Equipment	
4710	Pipe and Tube	C7-10
4720	Hose & Tubing, Flexible	C7-11
4730	Fittings & Specialties: Hose, Pipe, and Tube	C7-12
4810	Valves Powered	C7-13
4820	Valves, Nonpowered	
5110	Hand Tools, Edged, Nonpowered	C6-4
5120	Hand Tools, Nonedged, Nonpowered	C6-5
5130	Hand Tools, Power Driven	C6-6
5133	Drill Bits, Counterbores, and Countersinks: Hand & Machine	
5136	Taps, Dies, and Collets: Hand & Machine	
5140	Tool & Hardware Boxes	
5180	Sets, Kits, & Outfits of Hand Tools	C6-7
5210	Measuring Tools, Craftsman	C6-8
5307	Studs	C5307
5320	Rivets	C5320
5325	Fastening Devices	C5325
5330	Packing & Gasket Materials	C5330
5335	Metal Screening	C5335
5340	Miscellaneous Hardware	C5340
5345	Disks and Stones, Abrasive	C5345
5350	Abrasive Materials	C5350

FSC CLASSES		C-NUMBER
5355	Knobs and Pointers	C5355
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5450	Miscellaneous Prefab Structures	
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5520	Millwork	
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66	Items of Medical Materiel Only—Instruments & Lab Equipment	C3-11

FSC CLASSES		C-NUMBER
67 thru 99	(Items of Medical Materiel Only)	C3-12
	Components of Sets, Kits and Outfits (Medical)	C3-13
	Price & Supply Management Data (Medical)	C3-14
	Supply Management Data (Medical)	C3-15
	Alphabetical Index (Medical)	C3-16
	Medical Materiel Substitution List	C3-17
6750	Photographic Supplies	C6-9
6799	Items of Medical Materiel Only	C3-12
71	Furniture	C6-10
7210	Household Furnishings	C7210
7220	Floor Coverings	C6-11
7230	Draperies, Awnings, & Shades	
7240	Household & Commercial Utility Containers	
7290	Miscellaneous Household & Commercial Furnishings & Appliances	
73	Food Preparation & Serving	C6-12
7420	Accounting & Calculating Machines	C6-13
7430	Typewriters & Office Type Composing Machines	
7490	Miscellaneous Office Machines	
75	Office Supplies	C6-14
77	Musical Instruments, Phonographs and Home-type Radios	C6-15
78	Recreational and Athletic Equipment	C6-16
79	Cleaning Equipment and Supplies	C6-17
8000	Brushes, Paints, Sealers, and Adhesives	C8000
8105	Bags & Sacks	C6-18
8110	Drums & Cans	

FSC CLASSES		C-NUMBER
8115	Boxes, Cartons & Crates	C6-18
8125	Bottles & Jars	
8135	Packaging & Packing Bulk Materials	
8305	Textile Fabrics	C8305
8310	Yarn & Thread	C83A
8315	Notions & Apparel Findings	
8320	Padding & Stuffing Materials	
8325	Fur Materials	
8330	Leather	C83B
8335	Shoe Findings & Soling Materials	
8340	Tents & Tarpaulins	C8340
8345	Flags & Pennants	C8345
8405	Outerwear, Men's	C8405
8410	Outerwear, Women's	C8410
8415	Clothing, Special Purpose	C8415
8420	Underwear & Nightwear, Men's	C84A
8425	Underwear & Nightwear, Women's	
8430	Footwear, Men's	C8430
8435	Footwear, Women's	C8435
8440	Hosiery, Handwear, & Clothing Accessories, Men's	C84B
8445	Hosiery, Handwear, & Clothing Accessories, Women's	
8455	Badges & Insignia	C8455
8460	Luggage	C84C
8465	Individual Equipment	
8470	Armor, Personal	
8475	Specialized Flight Clothing & Accessories	C2-16A
85	Toiletries	C6-19
89	Subsistence	C1
91	Fuels, Lubricants, Oils, and Waxes	C4-1
93	Nonmetallic Fabricated Materials	C6-20
95	Metal Bars, Sheets & Shapes	C9500
99	Miscellaneous	C6-21

MORE

FSC CLASSES		C-NUMBER
67 thru 99	(Items of Medical Materiel Only)	C3-12
	Components of Sets, Kits and Outfits (Medical)	C3-13
	Price & Supply Management Data (Medical)	C3-14
	Supply Management Data (Medical)	C3-15
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77	Musical Instruments, Phonographs and Home-type Radios	C6-15
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79	Cleaning Equipment and Supplies	C6-17
8000	Brushes, Paints, Sealers, and Adhesives	C8000
8105	Bags & Sacks	C6-18
8110	Drums & Cans	

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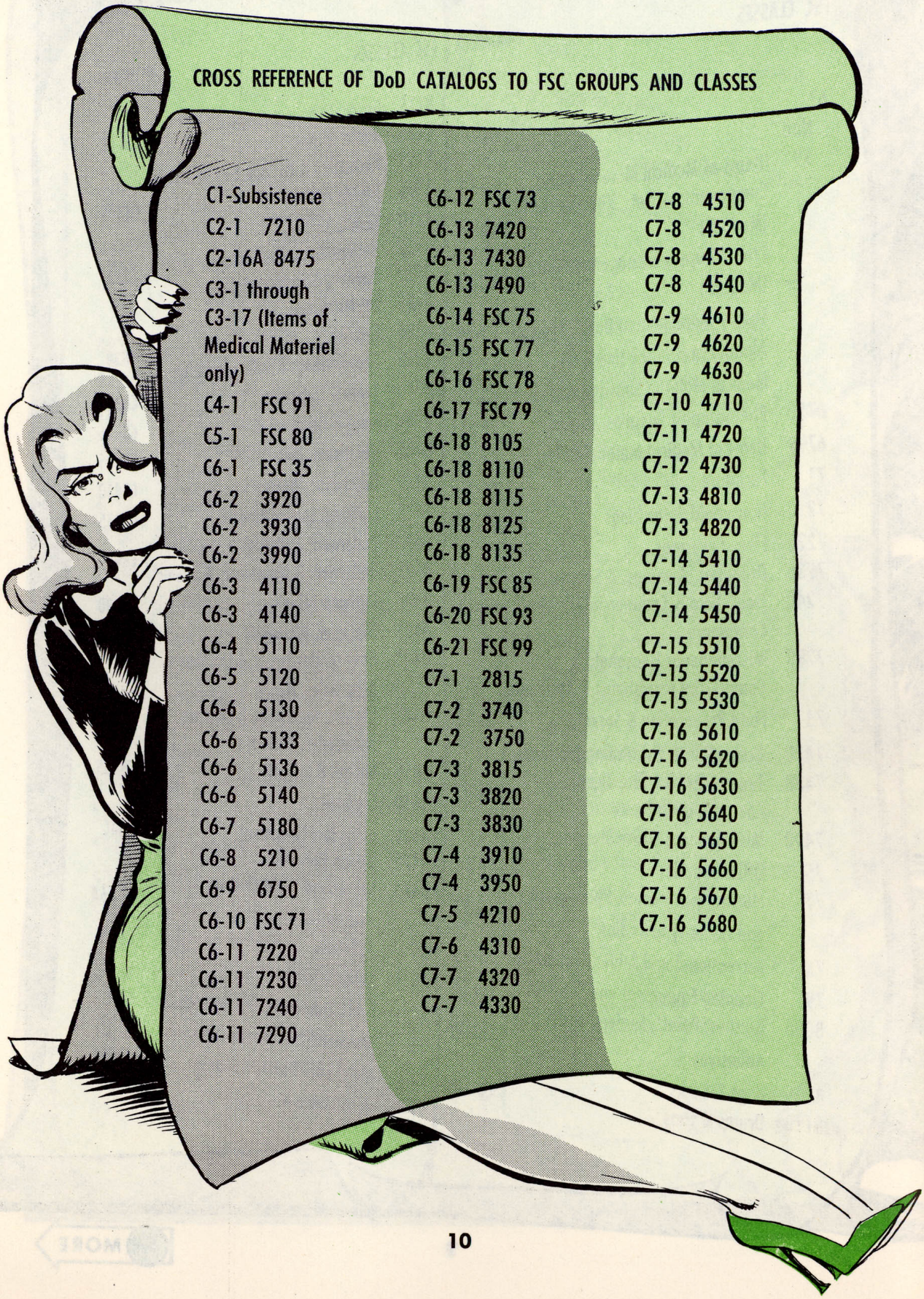
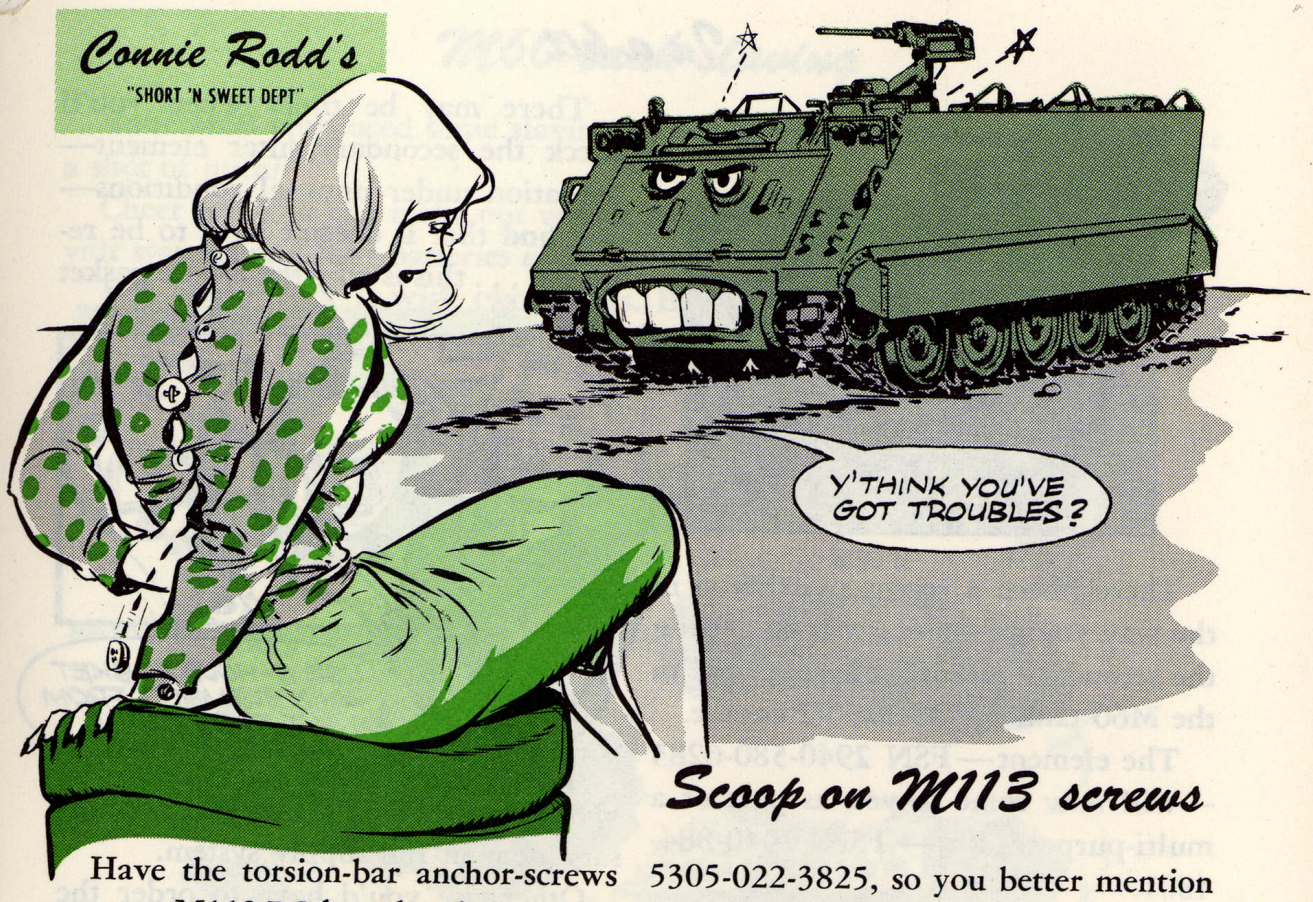
91	Fuels, Lubricants, Oils, and Waxes	C4-1
93	Nonmetallic Fabricated Materials	C6-20
95	Metal Bars, Sheets & Shapes	C9500
99	Miscellaneous	C6-21

PS MORE

You don't throw out your Supply Manuals published by the different tech services—just the ones that are superseded by the new DoD catalogs.





Scoop on M113 screws

Have the torsion-bar anchor-screws on your M113 PC been busting on you?

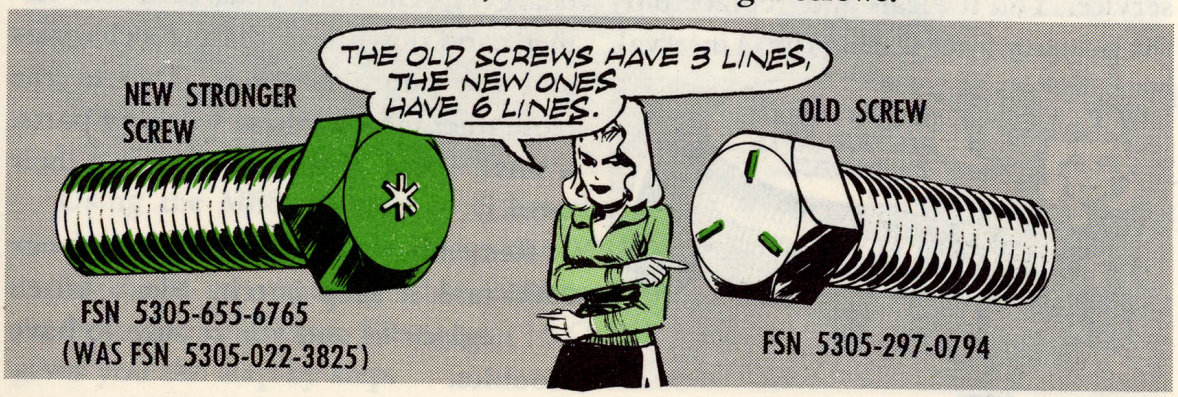
These are the screws, FSN 5305-297-0794, listed in TM 9-2300-224-20P (Nov 61) as Item 3 on page 107.

Well cheer up! If your screws are busting, you now can get new and stronger ones from supply.

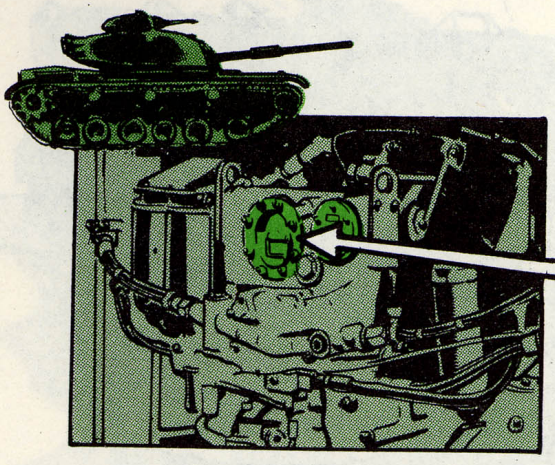
Ask for FSN 5305-655-6765, Screw, Cap, hexagon head: alloy-S, cd- or zn-pltd, 3/4-16UNF- 2A x 2. In some supply publications they may still be listed under an old deleted number, FSN 5305-022-3825, so you better mention both numbers when you order.

The old screws were made of medium carbon steel and they had three lines on the hex head. The new, stronger, screws are made of alloy steel and they have six lines on the head. That's how you can tell which is which.

So-o-o-o, if you're having troubles, order the new, stronger, screws. You won't have this trouble on the new production vehicles 'cause they're getting the stronger screws.



In a kit

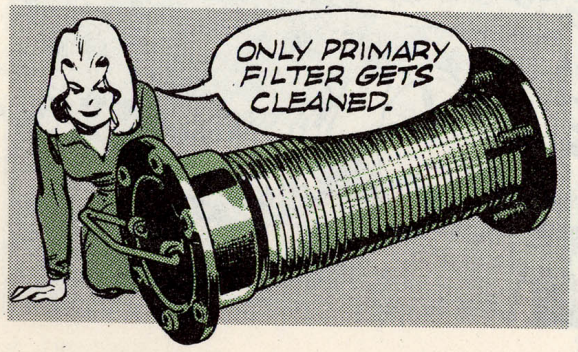


There's been a recent switcheroo in the way you mechanics will be getting the secondary oil filter element used in the M60 tank AVDS 1790-2 engine.

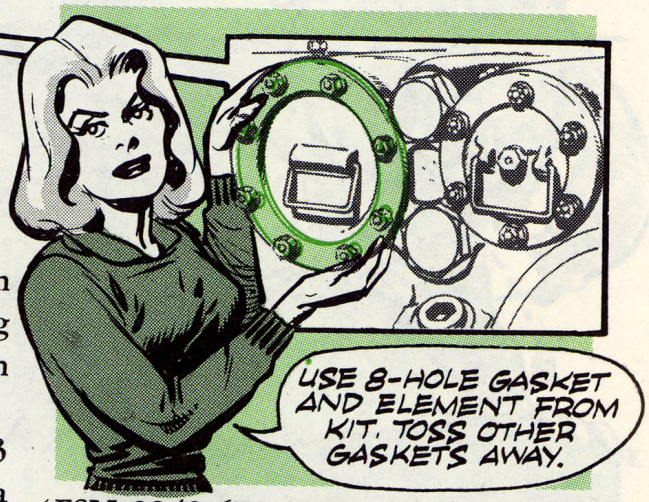
The element—FSN 2940-580-6283—will now come to you as part of a multi-purpose kit — FSN 2940-884-4801.

So-o-o-o, when you get the kit, don't be tryin' to use all the parts you find in it . . . use just the 8-hole gasket (part 8725201) and the element (part 8748329). Toss the other two gaskets away. O'course, if you've gotta M35A1 2½-ton truck with an LDS 427 engine, then you'll use the whole kit.

You don't clean the secondary oil filter element at all . . . it gets tossed out and a new one put in at each Q service. You'll clean and replace only the primary filter during the Q interval.



There may be times when you'll check the secondary filter element—operation under unusual conditions—and find that it doesn't have to be removed . . . this is why the 8-hole gasket



(FSN 2940-678-3277) is still a necessary item in the supply system.

Otherwise you'd have to order the entire kit every time the element gets checked on account of you can't use the old gasket again once you've taken out the element.

Keeping a good element in this filtering unit is vital to the operation of the fuel injector pump and the turbochargers. The lube runs thru the element and down into the turbochargers and the pump bearings. Due to the close tolerances in these working parts, a small speck of dirt can gum up their works.

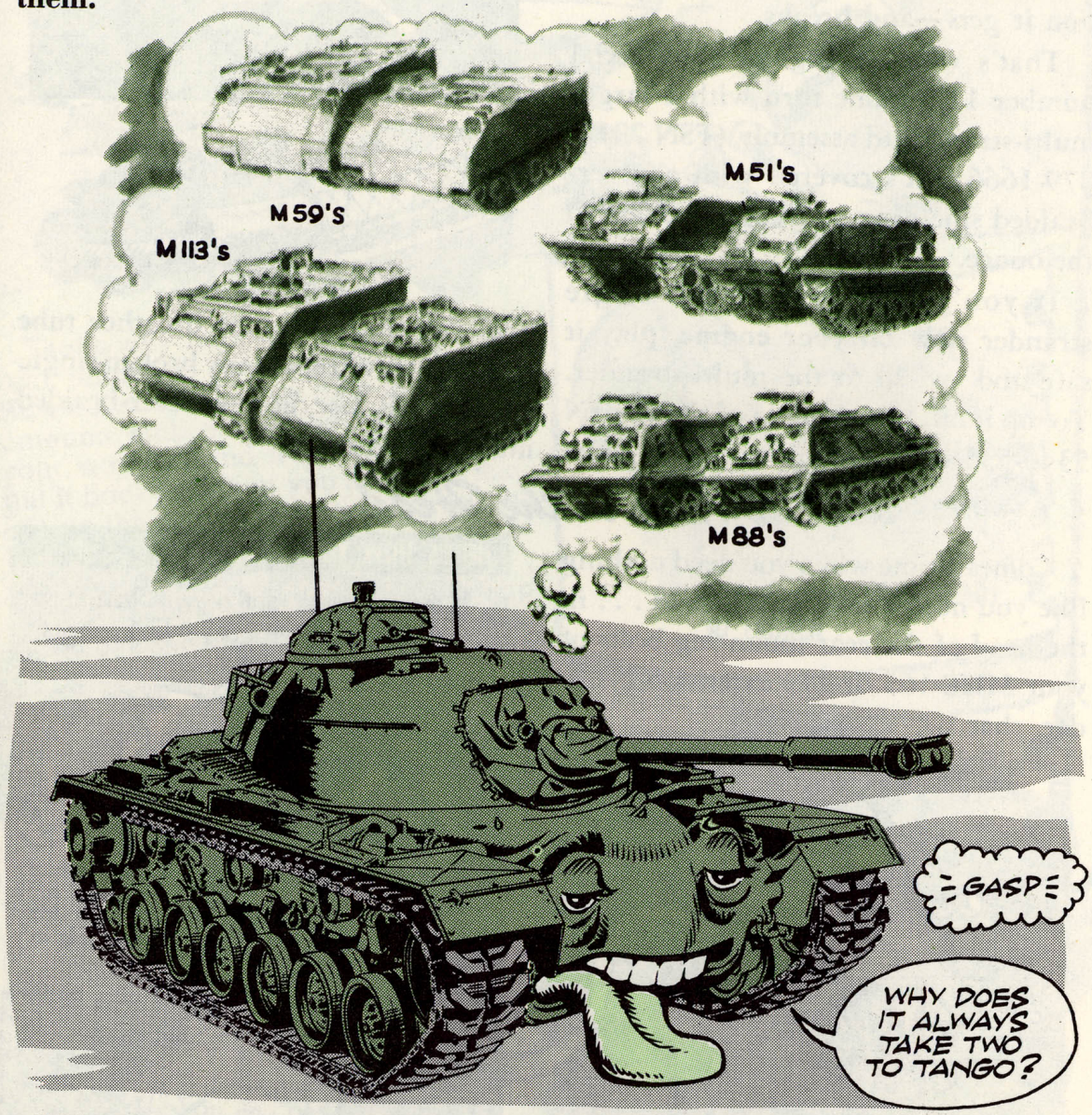
Remember this element and your M60 tank'll keep purrin' like a kitten . . . neglect 'er and you're sure to have troubles.

M60 tank slaving

Your M60 tank need some slaving and not another M60 in sight to give her a shot of juice?

Cheer up! You can make out with a pair of vehicles provided they have 24-volt systems and four batteries each.

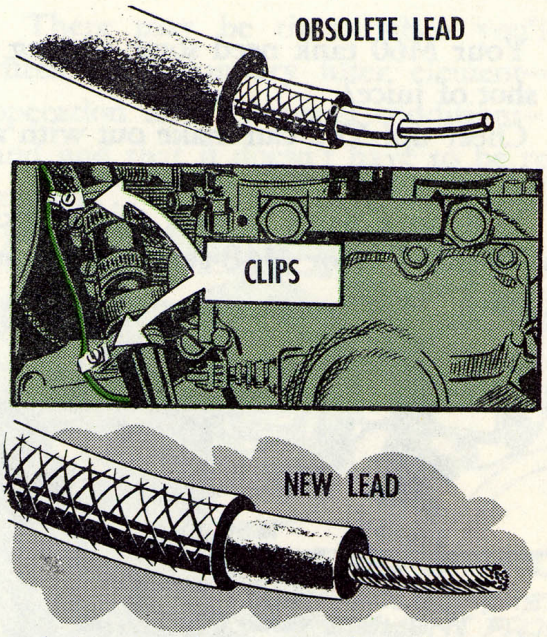
You can't work it with two trucks. But— **The M88 or M51 VTR, M59 or M113 PC, or M48-series tanks will turn the trick if you use a pair of them.**



Using the M88, connect to either the inside or outside receptacle — but don't run two slave cables from one M88. The batteries can't take it.

Just hook up a slaving cable from each of the vehicles to the M60 and you're ready to go in business. Change 4 (16 Oct 61) to TM 9-2350-215-10 (Jun 60) gives you the step-by-step.

A good lead



Seems the single-strand, black rubber-covered electrical lead running from the quick-disconnect bracket on the front of your M60's AVDS 1790-2 engine to the fuel shut-off solenoid, does not have enough flex to take the vibration it gets—and breaks.

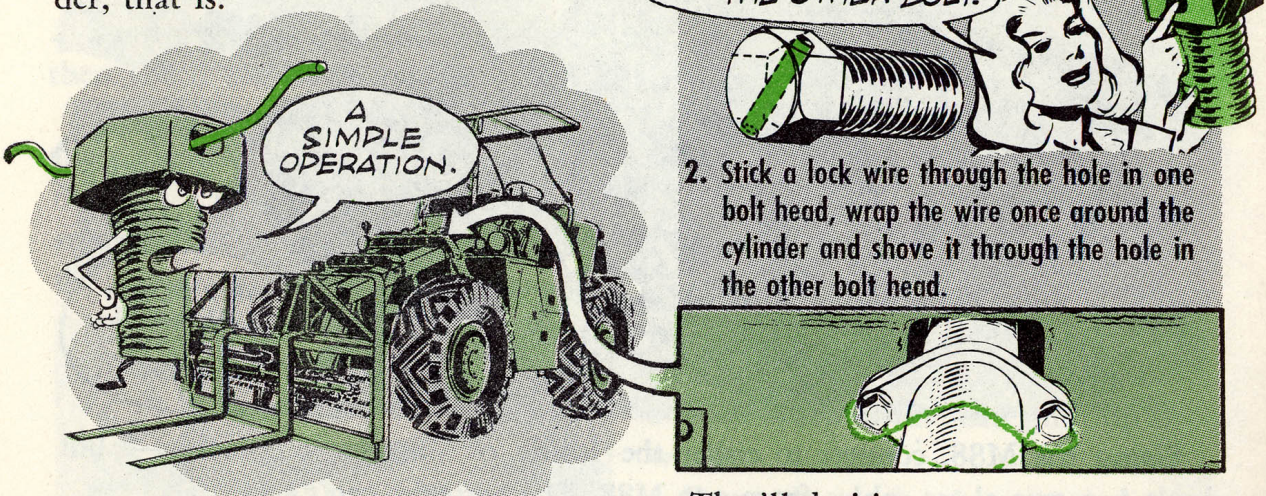
That's why all engines after serial number 1122 came thru with a larger multi-strand lead assembly (FSN 2910-879-1666). It's covered with a silver-braided shielding and has more flex to the ounce.

If you're not sure of the single strander now on your engine, play it safe and switch to the multi-strander. To top it off, use a couple of clips (FSN 5340-535-6468) to steady 'er. Just hook 'em to the engine breather tube.

Don't try to repair any broken single-strand leads. Use the new silver-braided, multi-strand ones.

Hole in the Head

Comes a time when you need nothing like you need a hole in the head . . . in the head of the rear mounting bolts of your MHE-165 or 173 extension cylinder, that is.

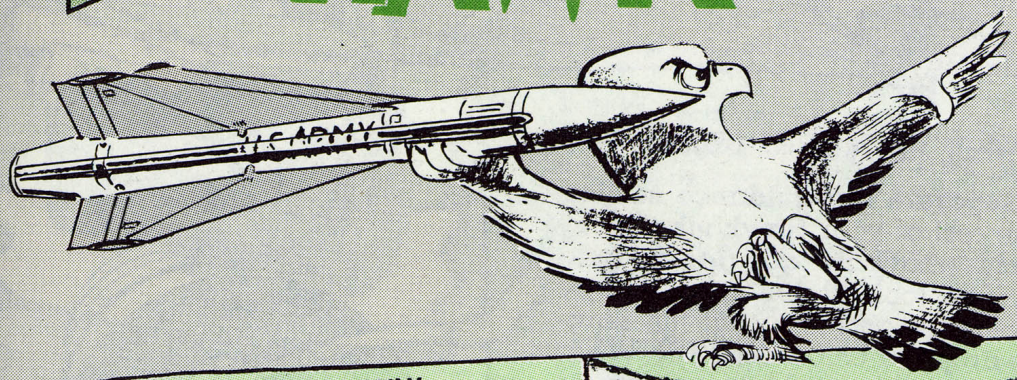


A lock wire through these heads can keep the cylinder from working loose and falling out maybe (ugh!).

That'll do it!

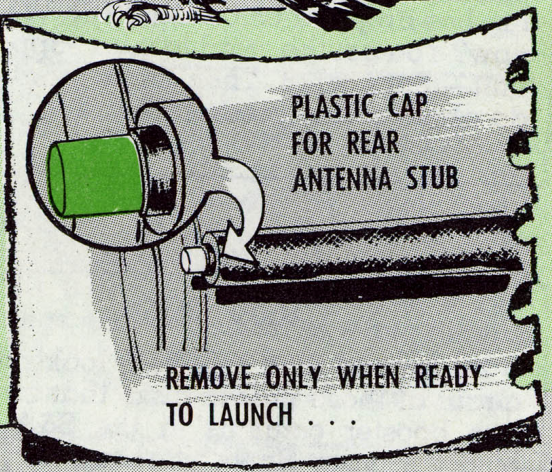
Incidentally, if you ever have to replace a bolt with a hole in the head, use FSN 5305-375-0760.

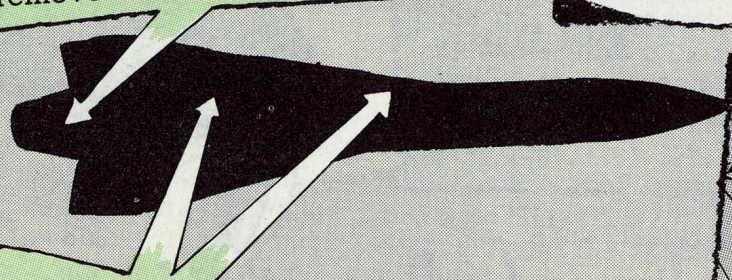
YOUR HAWK NOTE BOOK



FOR SHIPPING ONLY

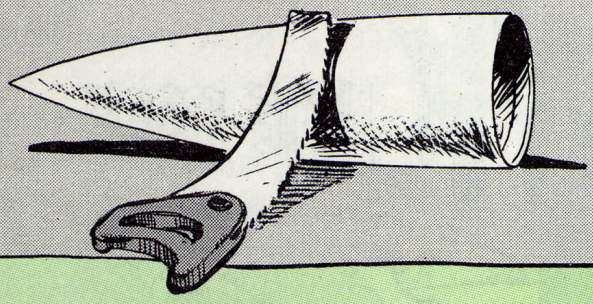
That's why the plastic cap is on the rear reference antenna stub for your Hawk missile. The cap gets put on the antenna stub when the bird is sent your way . . . and it's a good idea to put it back on when you send the missile up the supply line for any reason. If yours is missing, you can get a replacement under FSN 1430-978-4260, OPN 9070091. Just make sure the cap is removed from ready-to-fire missiles.





STOP STORING WATER

You tired of trying to get rid of the water that collects in the two hoist holes on top of your Hawk missile? Then close 'em up with some pressure-sensitive adhesive tape—the same kind that you used on the six holes in the warhead. You get it on local procurement . . . and it's listed under FSN 8135-721-9756 in Price List Supplement No. 6 (6 Nov 61) to FSC C6-18-PL-S (2 May 61). It won't be in the way when you go to fire the bird, but you'll have to remove it before you handle the missile with the loader. This little bit of work beats fighting the water.

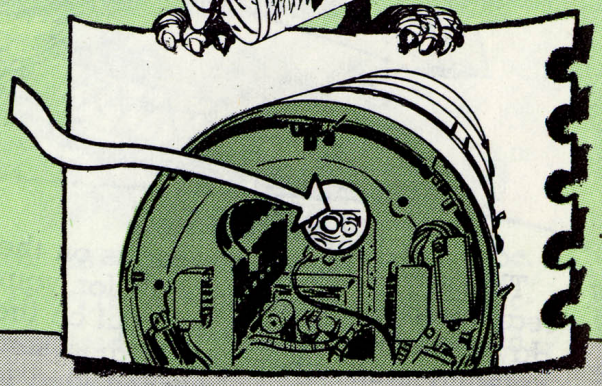


THIS HERE IS THE GUIDANCE SECTION... GOT THAT?!

GUIDANCE

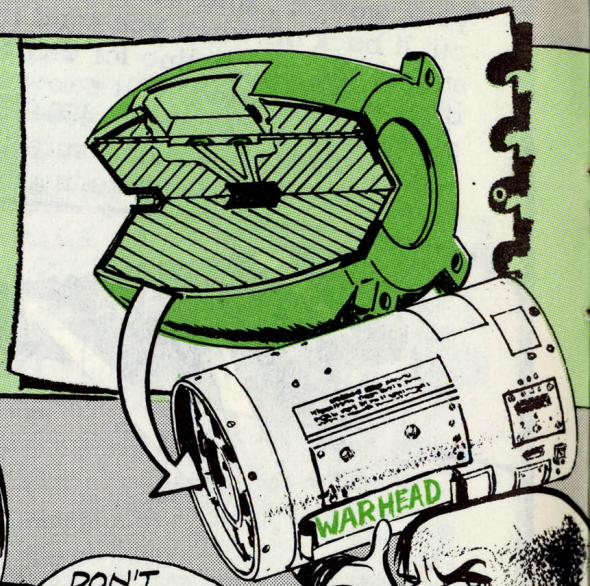
WHEN THE PRESSURE DROPS

You separate the guidance section from the rest of your Hawk missile . . . and then remove the gas turbine generator. You look at the accumulator pressure gage and find that the reading has dropped below 3800 PSI. What now? You get the word to your support unit—that's what. They know what to do about a low pressure reading.

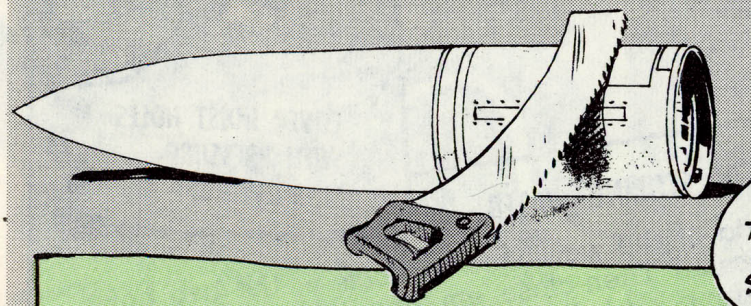


LOOSE DISKS?

It's a good idea to take a look now and again at those plastic disks that cover the two booster columns in the S&A device cavity in your Hawk warhead. If you see that they're loose, don't do a thing—except to call the ammunition people up the line. They have some stuff that they use to fasten the disks in place.



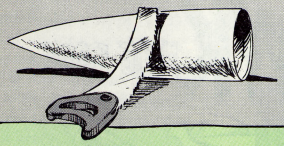
WARHEAD



DON'T FORCE TEST PROBES INTO YOUR S&A DEVICE.

HAWK MISSILEMEN

If you haven't heard the word yet . . . here it is. Don't force the tips on the test probes for your AN/PSM-6 multimeter into the receptacles in the S&A device and initiator plugs. They don't have to fit into the receptacles to give you a reading. All the probes have to do is just touch the receptacles.



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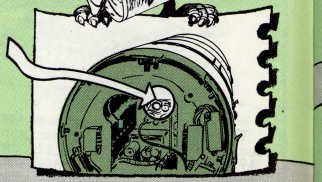

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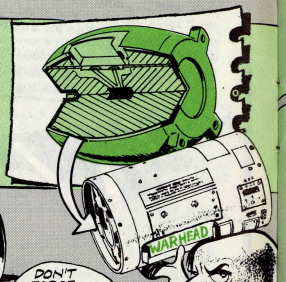

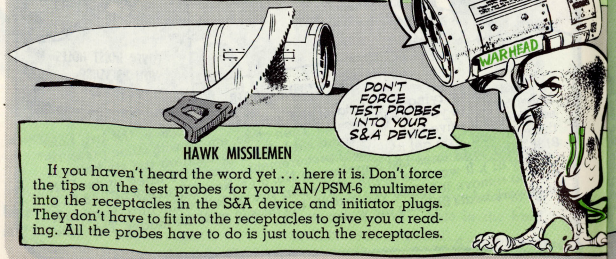

HAWK MISSILEMEN

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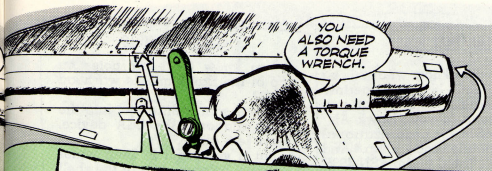
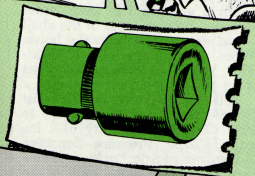


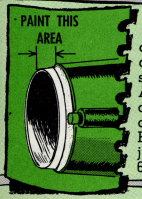


IT'S IN THE SM

You know what this is? Right. It's a socket wrench adapter that you Hawk outfits use when you're torquing the wing bolts on the missile.

But do you know where to find it when you need a replacement?

You're on the ball if you say SM 9-4-4935-A01. It's the first item on page 3—under FSN 5120-240-8702.



FOR YOUR NOZZLE

Your support unit has the things you need to put on the end of your Hawk missile's exit nozzle before you apply two finish coats of white lacquer. What gets put on the nozzle first is stuff called Coating Compound, Metal Pre-Treatment, Resin-Acid. You get it in a 5-gal kit under FSN 8030-597-0892. Next comes zinc chromate. FSN 8010-515-2208 brings you a 1-gal can. And you wind up things with two coats of white lacquer. FSN 8010-161-7279 is worth 1 gallon. Everything needed for the job is in FSC C8000-SL, Vol 1, (SM 5-1-C8000-SL-1) dated 1 May 62.

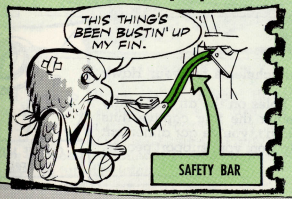
SAD FIN(ISH)?

So you have a problem with a fin on one of your Hawk missiles.

Like maybe the fin on the left-hand missile gets beat up when you move it off the loader-transporter.

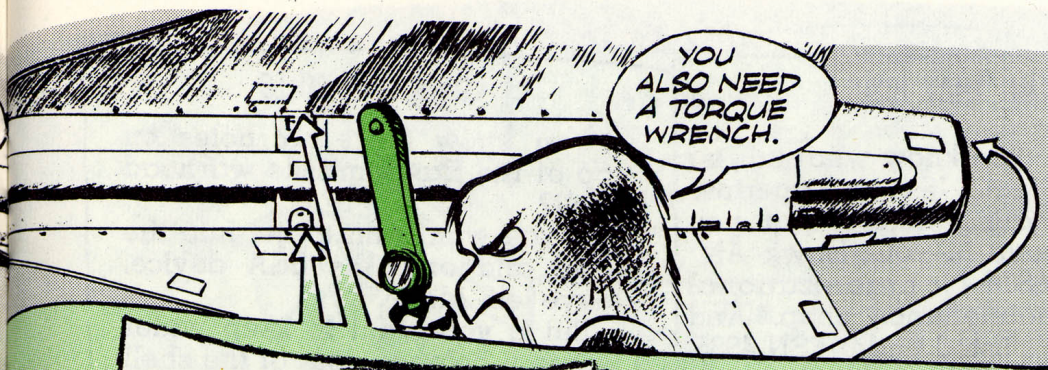
A close look'll probably tell you that the fin is banging against the safety bar on the rear missile-support-assembly.

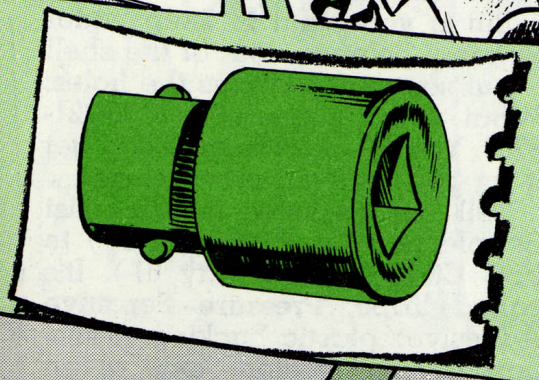
There's a way for you drivers to handle the situation until a new-type of safety bar finds its way to your outfit.



First . . . stop the loader-boom-assembly at the fully extended and maximum rear position until the missiles stop swinging. Then lower the boom-assembly. That oughta stop the fin damage.

Second . . . it wouldn't hurt to wrap some sponge or foam rubber around the bar. The stuff'll take up the shock in case the bar gets in the way of the fin.





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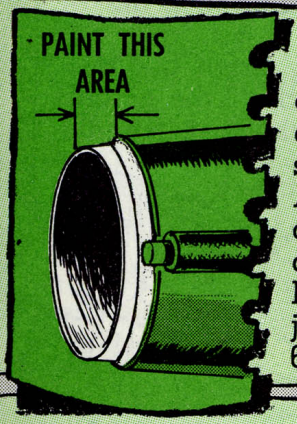

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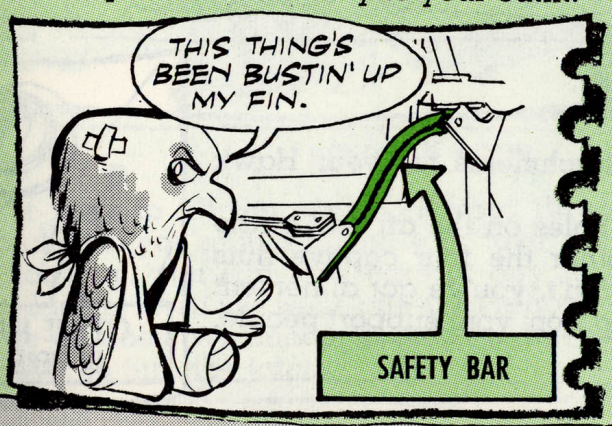

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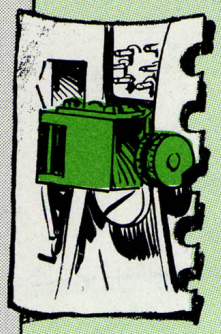


You know what this is? Right. It's an aperture sealing fixture that you have in your Hawk AN/MSM-43 organizational maintenance shop. And it's listed under FSN 4935-898-4312.

It's used to plug the breather port—like in the picture—while you're purging the missile.

COVER THE HOLES

You know those six holes on top of the Hawk missile warhead shell?

If you want rain to get into the shell and onto the S&A device, leave 'em alone.

But if you want to keep water where it belongs—out of the shell—put some tape across the holes. What you want is FSN 8135-721-9756. Your support people can get it for you on local procurement.

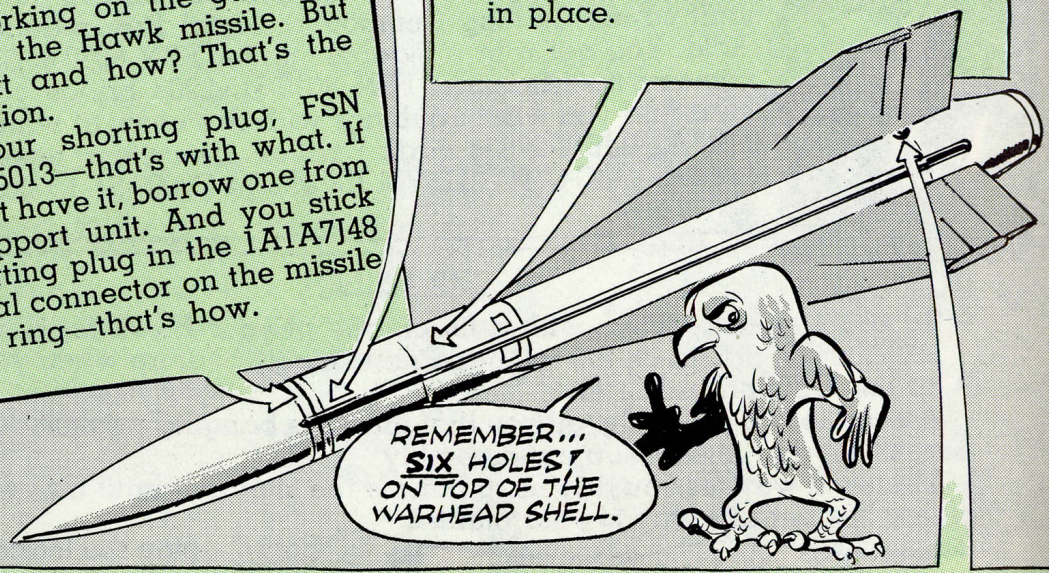
Tell 'em it's listed in Price List Supplement No. 6 (6 Nov 61) to FSC C6-18-PL-S (2 May 61). It's called Tape, Pressure-Sensitive Adhesive: plastic backing; transparent; clear; acetone, acid, alkali and ketone resistant; 3-in ID of core; 1-1/2-in w; 72 yd. lg.

Every time you move the missiles with the loader take a look at the tape to make sure it's still in place.

THE ANSWERS

Ok . . . you're supposed to short the accumulator squib when you're working on the guidance section of the Hawk missile. But with what and how? That's the big question.

Use your shorting plug, FSN 5935-767-5013—that's with what. If you don't have it, borrow one from your support unit. And you stick the shorting plug in the 1A1A7J48 electrical connector on the missile gimbal ring—that's how.



IT'S TRUE

There's only one way to tell.

If you want to see if the wing attachments for your Hawk missile are misalined, do it this way:

Look into the four wing mounting holes on the aft end of the motor case. Then you can see whether the four captive nuts line up with their openings. If they don't, you've got alinement troubles... and it's time to call for help from your support people.

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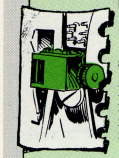

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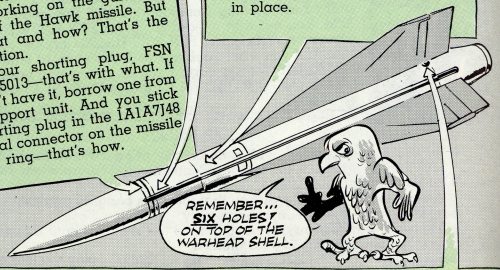

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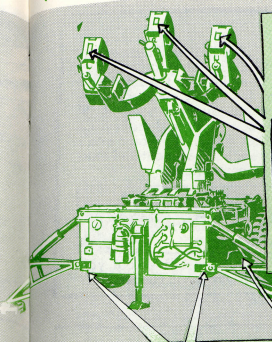
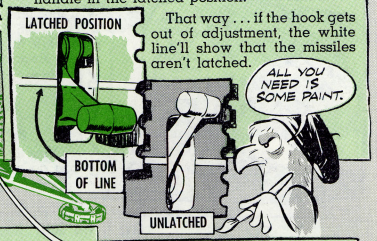


PLAY IT SAFE

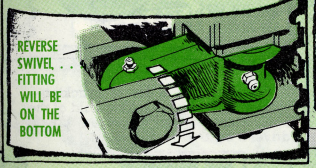
A little white paint . . . . . that's all it takes. Yup . . . paint a white line across the face of the forward rotating sector on your Hawk launcher so that the lower edge of the line is at the top of the missile latch handle—with the handle in the latched position.

That way . . . if the hook gets out of adjustment, the white line'll show that the missiles aren't latched.



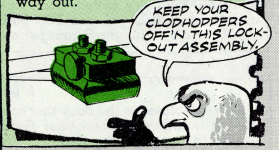
SWIVEL SWITCH

It can happen. If you raise the forward outrigger assemblies on your Hawk launcher much beyond the horizontal you can clobber the top grease fitting on the swivel. It doesn't have to happen, tho. And it won't—after you reverse the swivel to put the fitting on the bottom. Of course, that means the position of the second grease fitting also changes... so you'll have to swing each assembly around to get at it.



DON'T KNOCKOUT LOCKOUT

Maybe it's handy. But it's not made for using as a step. So keep your feet — makes no difference whether they're 7's or 17's—off the suspension lockout assembly on your Hawk launcher. And when you get ready to hit the road with the launcher, check to see that the lockout screw is turned all the way out.



NOW AND AGAIN

It pays to lift the covers off your Hawk launcher turret latches. If you're in a humid spot, take 'em off once a week. That way, you can take care of any water and rust that builds up. Then use some oil—OAI is good—inside the latch. The oil does two things: It helps fight rust and it makes it easier to turn the latch.

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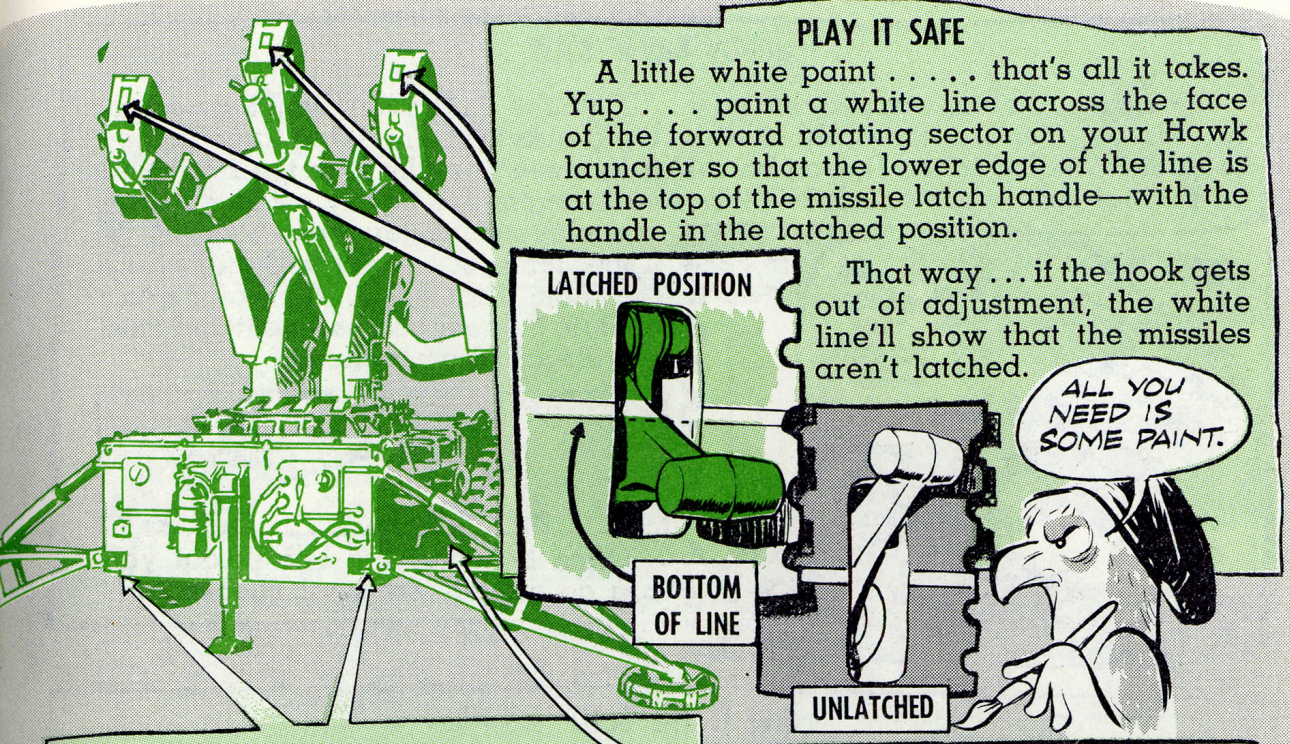

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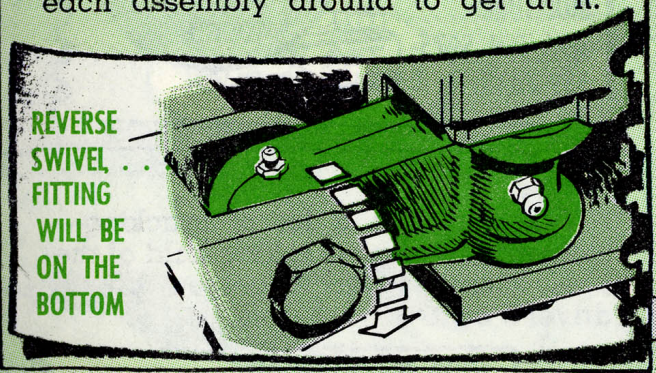

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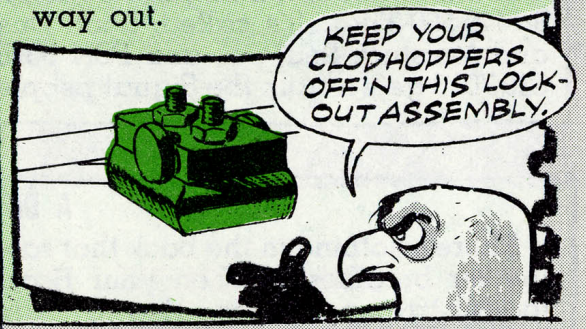

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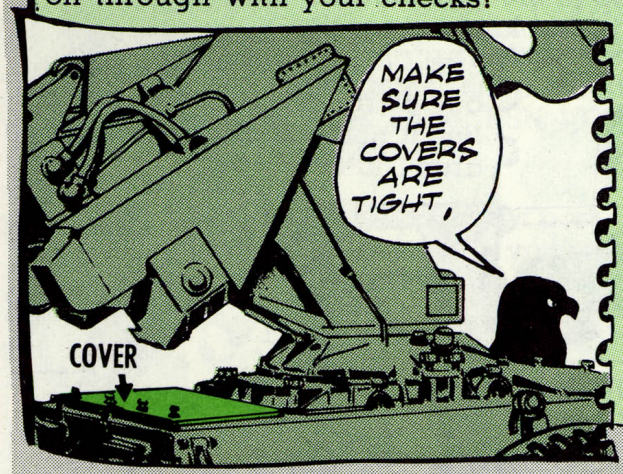
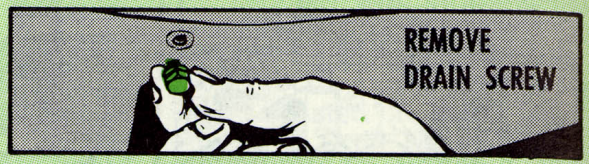


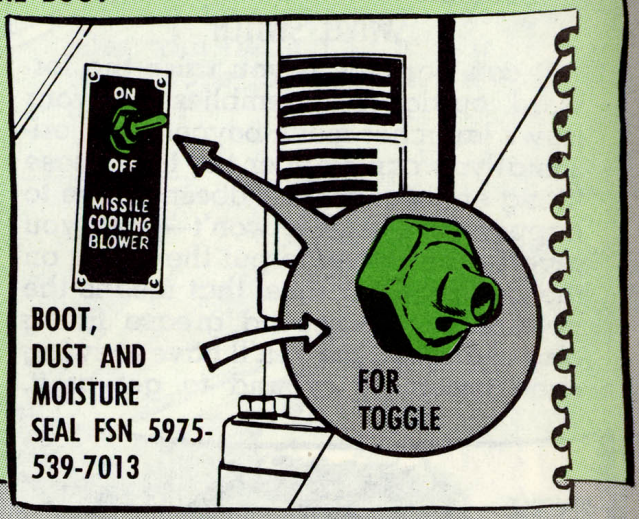
If you're on the ball, you'll do something else first. The thing to do is take a look-see to make sure the front and rear covers are tightly secured. Then you elevate the launcher boom to its upper limits so's water will drain from the boom. That way . . . the water won't get into the rear compartment and onto the electrical components.



Once the water has drained out, you can go ahead with your checks.

GIVE IT THE BOOT

If the serial number of your Hawk launcher is below 09323, could be you've been having shorting troubles with the missile cooling blower. The newer launchers have a boot covering the blower toggle switch . . . and it helps keep out the moisture that leads to the shorts. There's no reason you shouldn't have a boot covering your switch. And you can. Your support unit'll find one listed on page 14 of TM 9-1440-500-35P-1. It's called, Boot, Dust and Moisture Seal . . . and FSN 5975-539-7013 gets it from the Signal people.



A DIRTY DEAL

There's nothing in the book that says the air breather hose on your Hawk loader-transporter is also a "dirt breather hose." But that's what happens if you don't tend to any cracks you find in the hose. Dirt that belongs on the outside can be sucked into the hose through the cracks. And if it works its way into the engine, you're gonna wind up with scored parts. All it takes is some plastic tape (make it black) to seal off the cracks.

You can halt a lot of cracking—incidentally—by not taking hold of the hose when you go to get out of the driver's seat.

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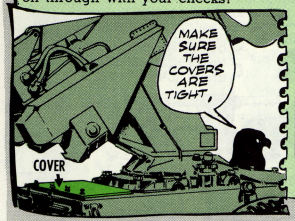

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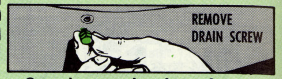

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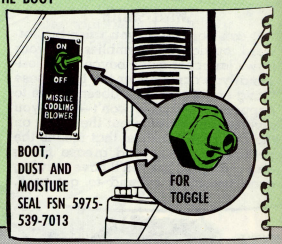

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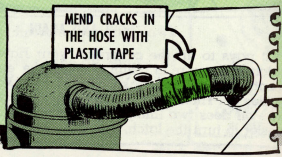
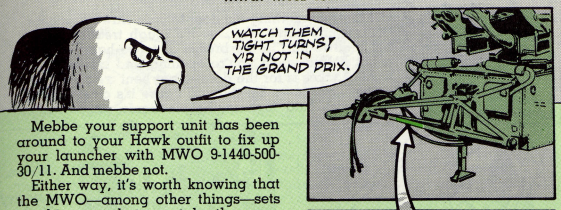
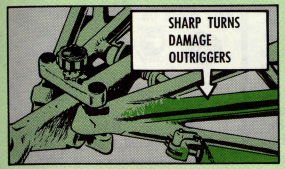


WATCH THOSE TURNS



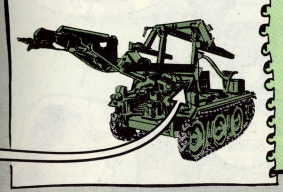
Mebbe your support unit has been around to your Hawk outfit to fix up your launcher with MWO 9-1440-500-30/11. And mebbe not.

Either way, it's worth knowing that the MWO—among other things—sets up things so that you take the sway braces off the launcher and put 'em in the launcher's forward compartment when the equipment's in march order. And stowing the braces keeps the links on the braces from getting busted when you jackknife or turn the prime mover more than 35 degrees.



You still want to shy away from those sharp turns, tho. The sway braces might not be around for you to batter the links, but each outrigger assembly is wide open for a clobbering.

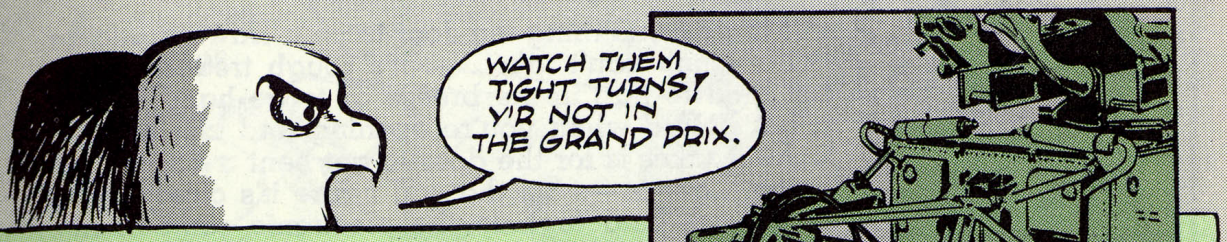
The same goes for the launchers now rolling off the production line. They already have the MWO applied, but you still want to handle the prime mover with care so's you don't batter one outrigger assembly or the other on the launcher.



TIME FOR A CHANGE

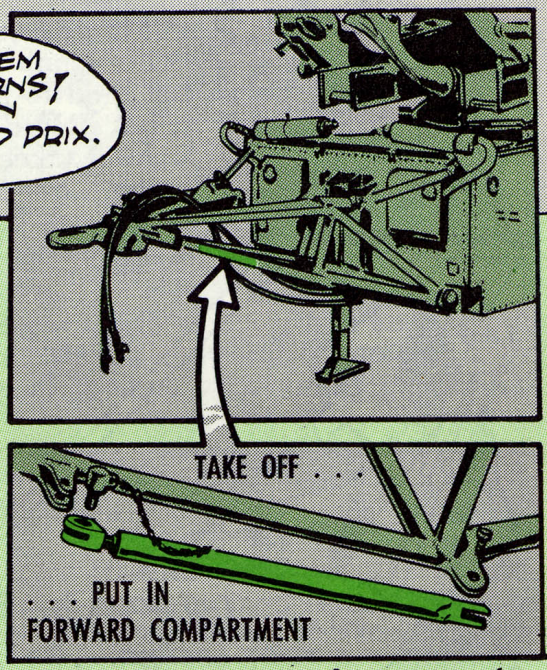
Did you get it yet? That'd be your copy of Change 1 to TM 9-1450-500-10 on your XM 501E2 Hawk loader-transporter. It's dated 7 Dec 61 and has some important changes on transporting the loader . . . transferring missiles to or from the pallet or launcher . . . and adjusting the track tension.

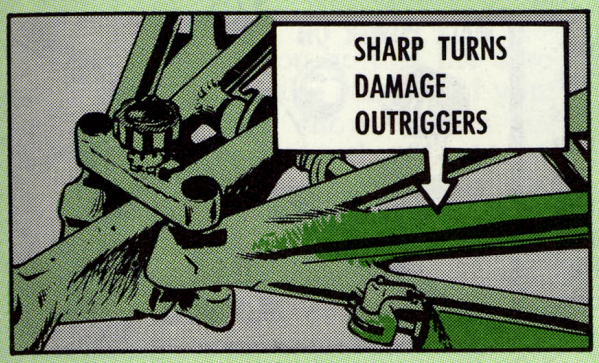
WATCH THOSE TURNS



Mebbe your support unit has been around to your Hawk outfit to fix up your launcher with MWO 9-1440-500-30/11. And mebbe not.

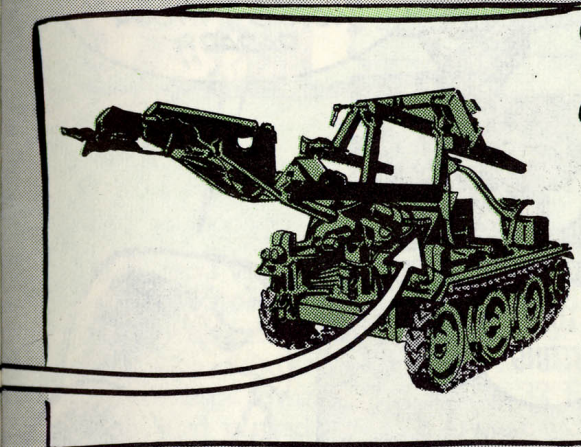
Either way, it's worth knowing that the MWO—among other things—sets up things so that you take the sway braces off the launcher and put 'em in the launcher's forward compartment when the equipment's in march order. And stowing the braces keeps the links on the braces from getting busted when you jackknife or turn the prime mover more than 35 degrees.





You still want to shy away from those sharp turns, tho. The sway braces might not be around for you to batter the links, but each outrigger assembly is wide open for a clobbering.

The same goes for the launchers now rolling off the production line. They already have the MWO applied, but you still want to handle the prime mover with care so's you don't batter one outrigger assembly or the other on the launcher.



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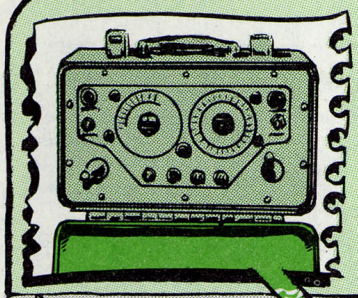
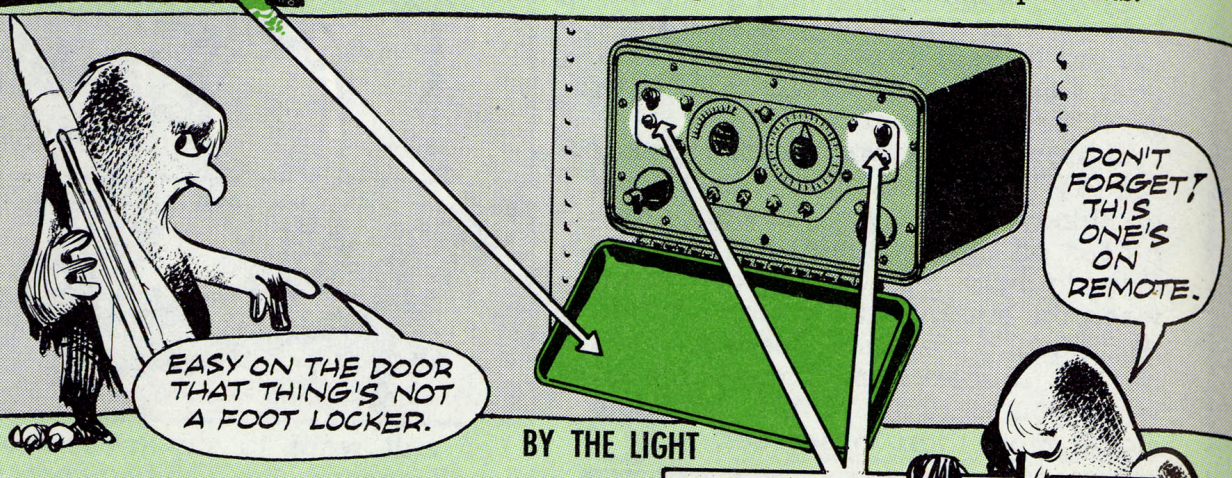
GO EASY

If there's one thing the door to your Hawk launcher control unit can't take . . . it's rough treatment. It's not built to flap in the breeze or to be handled like a hot potato when you're opening and closing it.

All it takes is for the door to get bent a little. Then water'll get in—even tho you figure it's closed good and tight—and foul up the electronic components.





BY THE LIGHT

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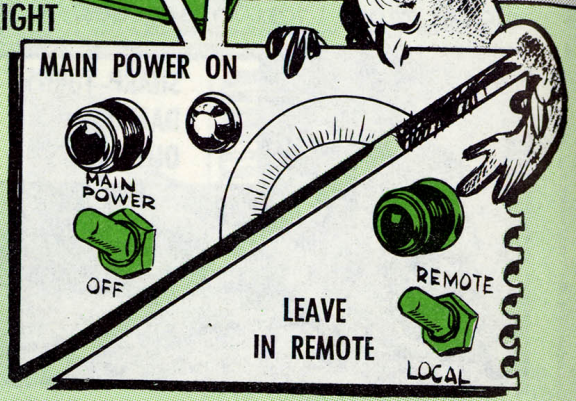
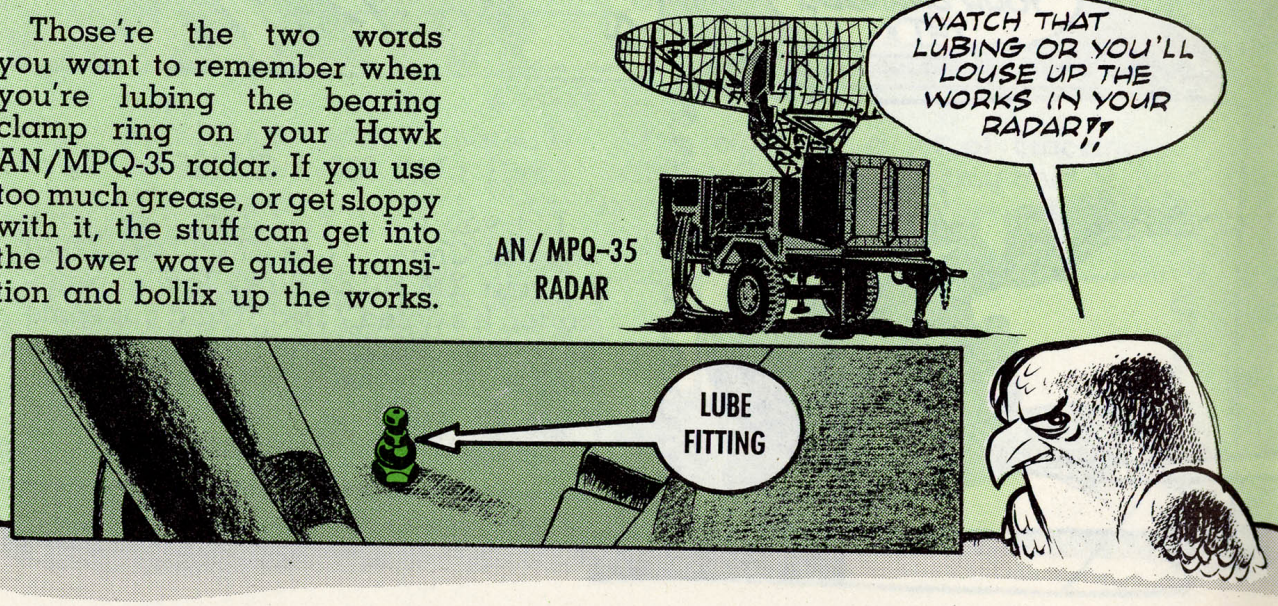


SPARINGLY AND CAREFULLY

Those're the two words you want to remember when you're lubing the bearing clamp ring on your Hawk AN/MPQ-35 radar. If you use too much grease, or get sloppy with it, the stuff can get into the lower wave guide transition and bollix up the works.



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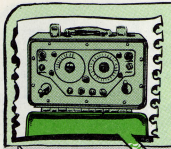

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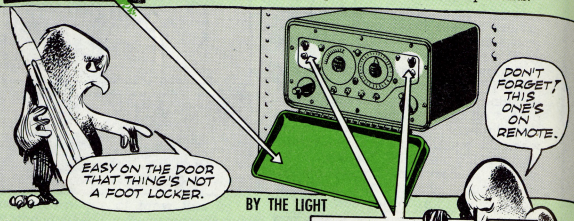

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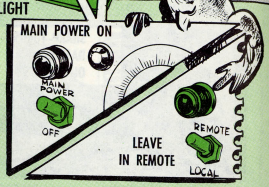

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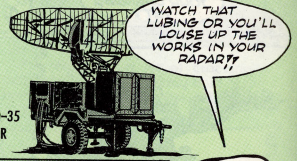
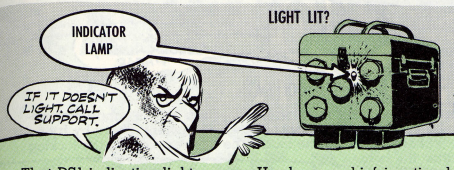
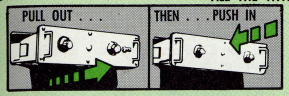


LIGHT LIT?



That DS1 indicating light on your Hawk crew chief junction box should be working. If not, call in your support people. Maybe they didn't replace and solder the two wires that go to the light while they were applying MWO 9-1440-500-30/7 to the CCBJ.

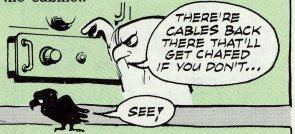
ALL THE WAY OUT—THEN IN



That's the way you handle the electronic packages in the cabinet of your Hawk missile test shop — when the packages are mounted on chassis slides. By pulling the package all the way out before you push it back in, you keep a section of the slides from moving ahead of the package and battering the cable or cable bracket.

Everything wants to move at one time.

And before you push in the package, give the branches of the main cable a twist so that the slack will be in the middle of the compartment. This'll keep 'em from getting chafed against the slides or brackets on the inside of the cabinet.



EASY-Y-Y-Y DOES IT

You want to go slow and easy when you turn the handle to lock the compartments on your Hawk CW acquisition radar. The end of the handle'll go flying if you slam it into the lip on the compartment.

LET THE WATER DRAIN

If you've crawled underneath your Hawk AN/MPQ-35 pulse acquisition radar lately, maybe you remember seeing a coupla petcocks. You want to keep remembering—that they oughta be left open except when you're fording. They let water drain out . . . and you know what happens to that stuff when the temperature dips below 32°F. Take a good look at the water as it comes out. Oil mixed with it means you have a leak in the gear assembly . . . and it's time to call on your support people.

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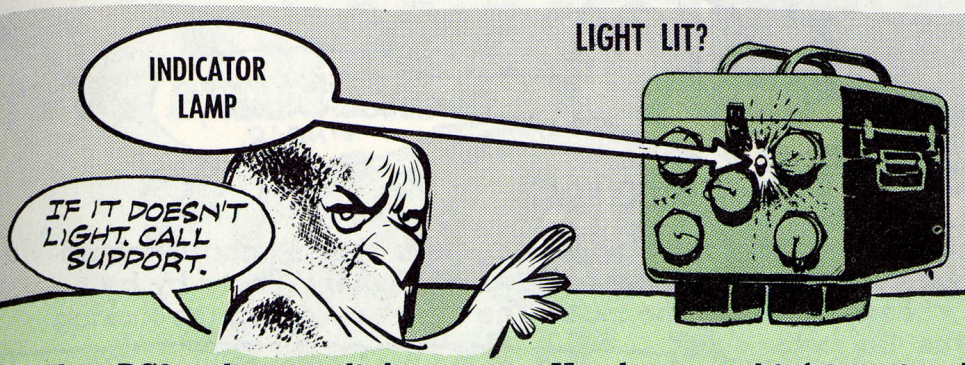

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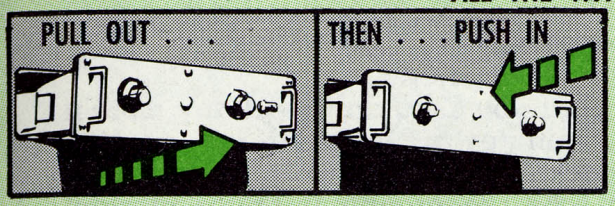

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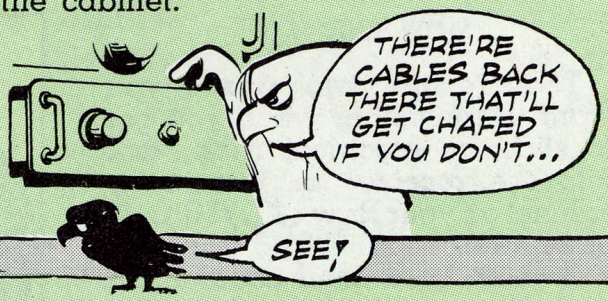

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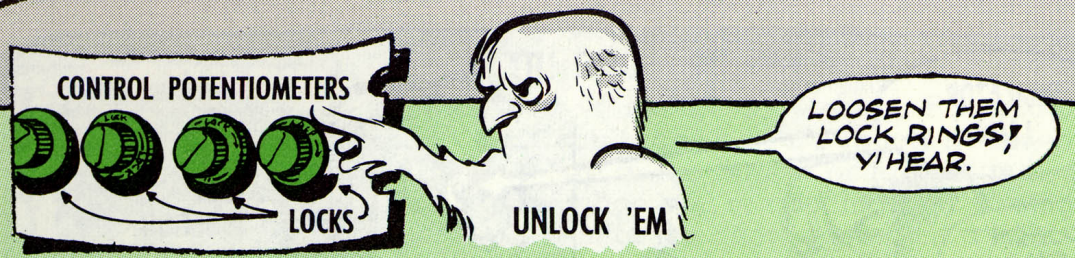
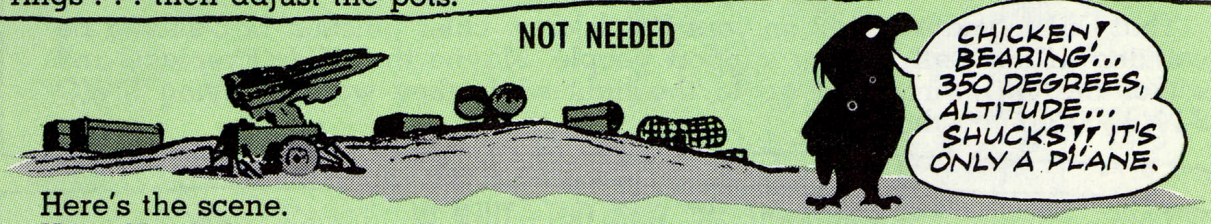


There's one sure way you can bust the locking rings for the control potentiometers you have on your different pieces of Hawk equipment. That's by trying to adjust the pots without loosening the locks. The answer: Loosen the locking rings . . . then adjust the pots.

NOT NEEDED



Here's the scene.

Your Hawk battery is called to action status . . . and the launchers and missiles are activated by the BCC.

One of two things is going to happen next. Either you're going to fire your birds or you're going to return to standby.

Question: How much time is needed before you fire the missiles or return to standby?

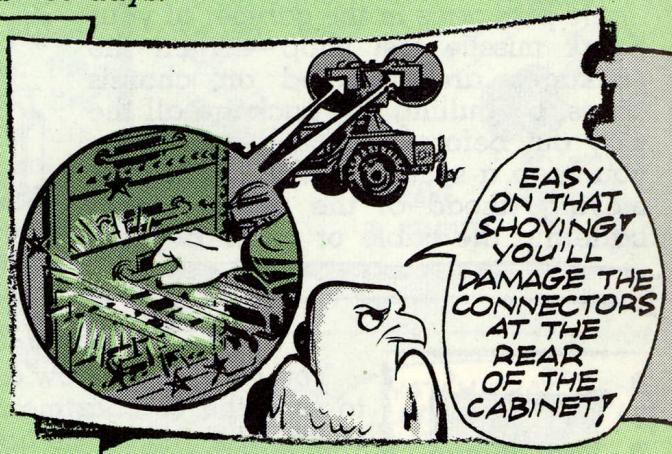
Answer: None.

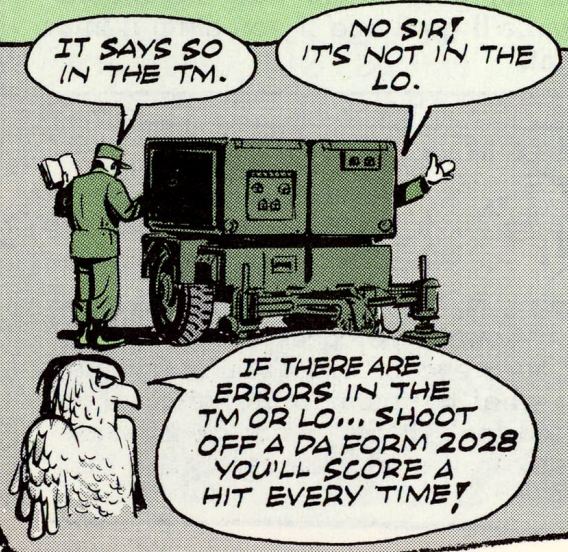
And you shouldn't need any more'n 20 minutes for a valid ground line check. The missiles ought to be able to hold the ground lines for at least 90 days.

SLOW AND EASY

Those're the two words you want to remember when you got to slide an electrical rack back into the receiver or transmitter cabinet on your Hawk AN/MPQ-33 or 34 radar sets.

A quick, hard shove could mean real damage as the jack at the rear of the rack slams into the plug in the cabinet.



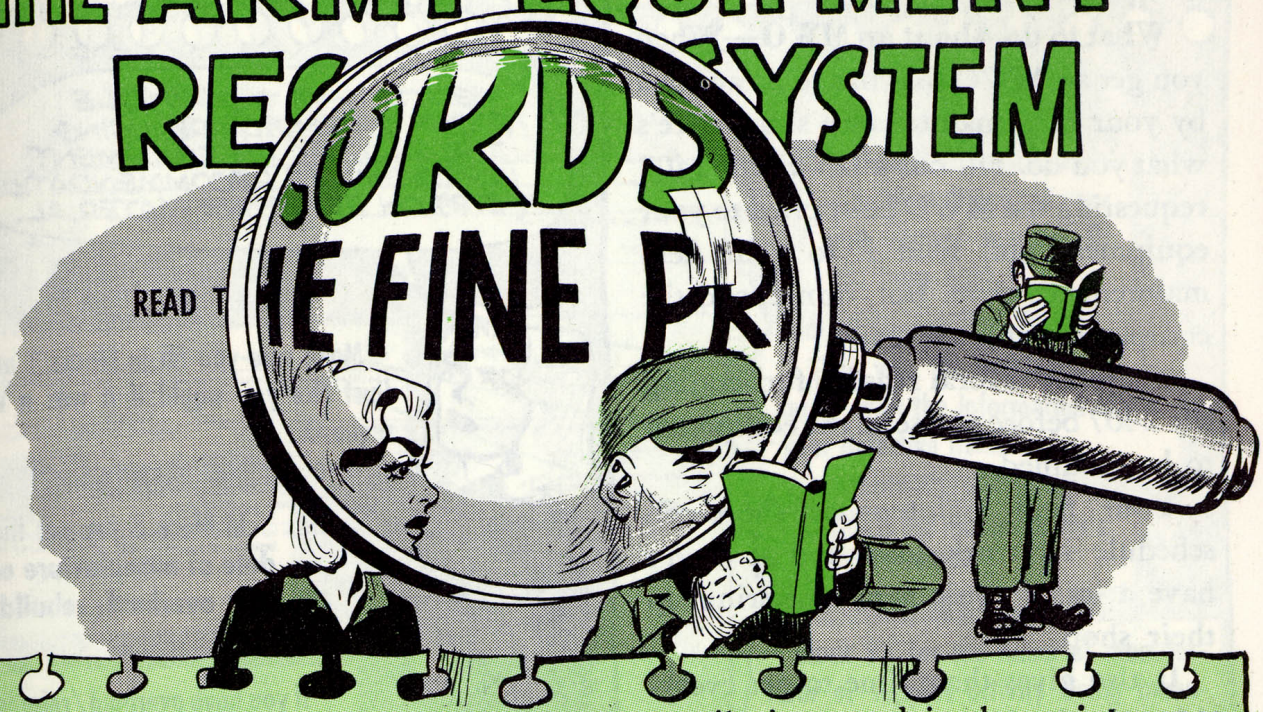


THE RIGHT SCOOP

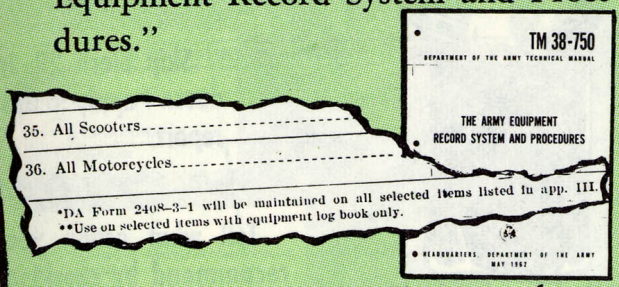
It sure can be frustrating—the way the LO, TM and instruction plates don't always jibe when it comes to your Hawk equipment—like the missile test shop. What do you do?

Seeing's how it's possible for LO's and TM's to have errors in them, the guy who's on the ball will fire off a DA Form 2028 when he runs across one. That way—he gets the latest and right scoop in his pubs.

THE ARMY EQUIPMENT RECORDS SYSTEM



Take care you don't overlook that short line of fine type at the bottom of Appendix II in TM 38-750, "The Army Equipment Record System and Procedures."


35. All Scooters----------

36. All Motorcycles----------

*DA Form 2408–3–1 will be maintained on all selected items listed in app. III.
**Use on selected items with equipment log book only.

TM 38-750

DEPARTMENT OF THE ARMY TECHNICAL MANUAL

THE ARMY EQUIPMENT RECORD SYSTEM AND PROCEDURES

HEADQUARTERS, DEPARTMENT OF THE ARMY
MAY 1962

The footnote (*) tells you to keep a DA Form 2408-3-1, "Equipment Maintenance Record (Organizational)", on all selected items listed in Appendix III.

Could be you've noticed some of the selected items listed in Appendix III, aren't listed in Appendix II. That means TM 38-750 doesn't require you to keep a complete maintenance, operation, and service-life history, on those particular items. That's because the national agencies responsible for those items are primarily interested in the **maintenance** data for those items . . . and they want the info at regular intervals. And, the -3-1 was designed to do exactly that kind of job.

Only thing is, when a selected item (like the AN/GRC-19 radio set, the M15 or M15A1 breathing apparatus or the MIG welding set) isn't supported by a regular maintenance log (per TM 38-750) **you mail the NMP copy of DA Form 2408-3-1 quarterly or when a form's all filled up** (to the address listed for the specific item in Appendix III).

The form's control copy goes to your next highest headquarters (or as per local SOP), and you keep the log book copy also according to the local rules. (See para 56(2) (d), page 101, of the TM.)

PS MORE

THE ARMY EQUIP

For those EIR's and your Maintenance Requests—

ABOUT YOUR DA FORM 2407 . . .

What to do About an MWO—When you get an MWO that has to be applied by your field maintenance shop, here's what you do. Fill out a DA Form 2407 requesting the MWO be applied to your equipment and send it to your field maintenance shop. But, **don't** send the equipment with the 2407.

There are several reasons for sending the 2407 before you send the equipment to be modified.

Your field maintenance shop can schedule its work load and it won't have a lot of equipment cluttering up their shop.

It also gives them time to get everything ready for applying the MWO. They may have to get material or may even have to order the MWO kits.

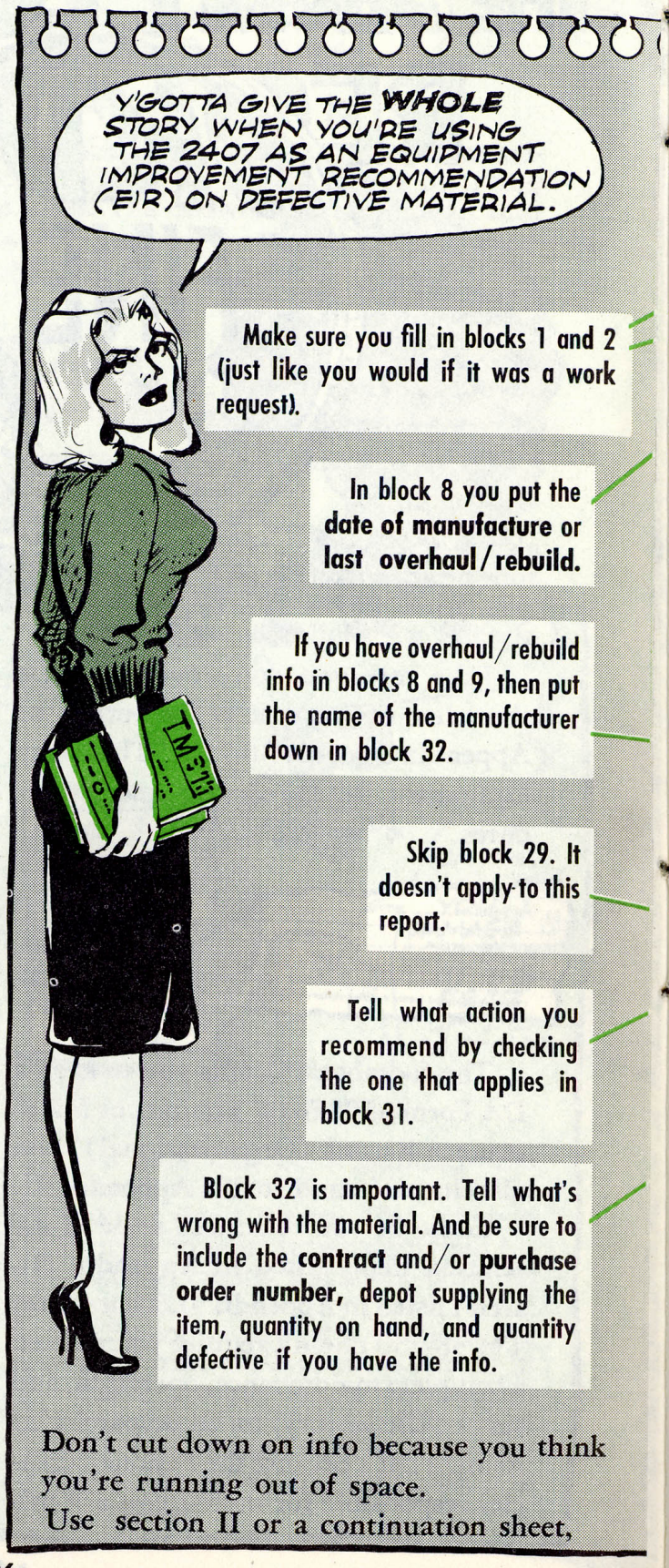
Also, you'll still be able to use your equipment while you're waiting for the word to send it to the shop.

And then there are times when the field maintenance people can apply the MWO in your shop.

ARE YOU DOING EXTRA WORK?

There have been cases where you've done extra work. How so? Well, if several like items of equipment need an MWO applied, maybe you could have used just one DA Form 2407 for listing all the items.

In case you're not sure whether you can use just one 2407 or have to list each item separately, get in touch with your field maintenance shop and they'll furnish the answer.



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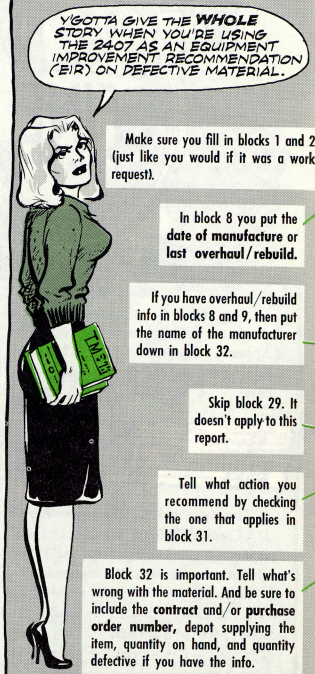


Make sure you fill in blocks 1 and 2 (just like you would if it was a work request).

In block 8 you put the **date of manufacture** or **last overhaul/rebuild.**

If you have overhaul/rebuild info in blocks 8 and 9, then put the name of the manufacturer down in block 32.

Skip block 29. It doesn't apply to this report.

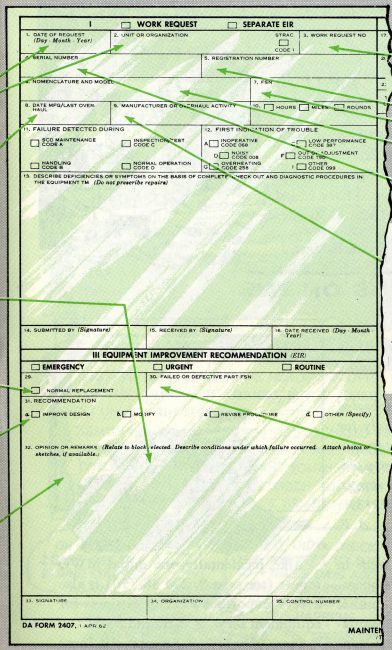
Tell what action you recommend by checking the one that applies in block 31.

Block 32 is important. Tell what's wrong with the material. And be sure to include the **contract** and/or **purchase order number,** depot supplying the item, quantity on hand, and quantity defective if you have the info.

Don't cut down on info because you think you're running out of space.

Use section II or a continuation sheet,

EIR ON EQUIPMENT FAILURES



In block 3 you put your unit control number (if you have one).

Then you fill in blocks 5, 6, and 7 with the information about your defective item.

This is the manufacturer's serial number.

Block 9's for the name of manufacturer or support activity doing manufacture or overhaul/rebuild (whichever applies). Look at the identification tag or package for info.

You can usually find the number of the contract the stuff was bought under by looking at the identification tag or package.

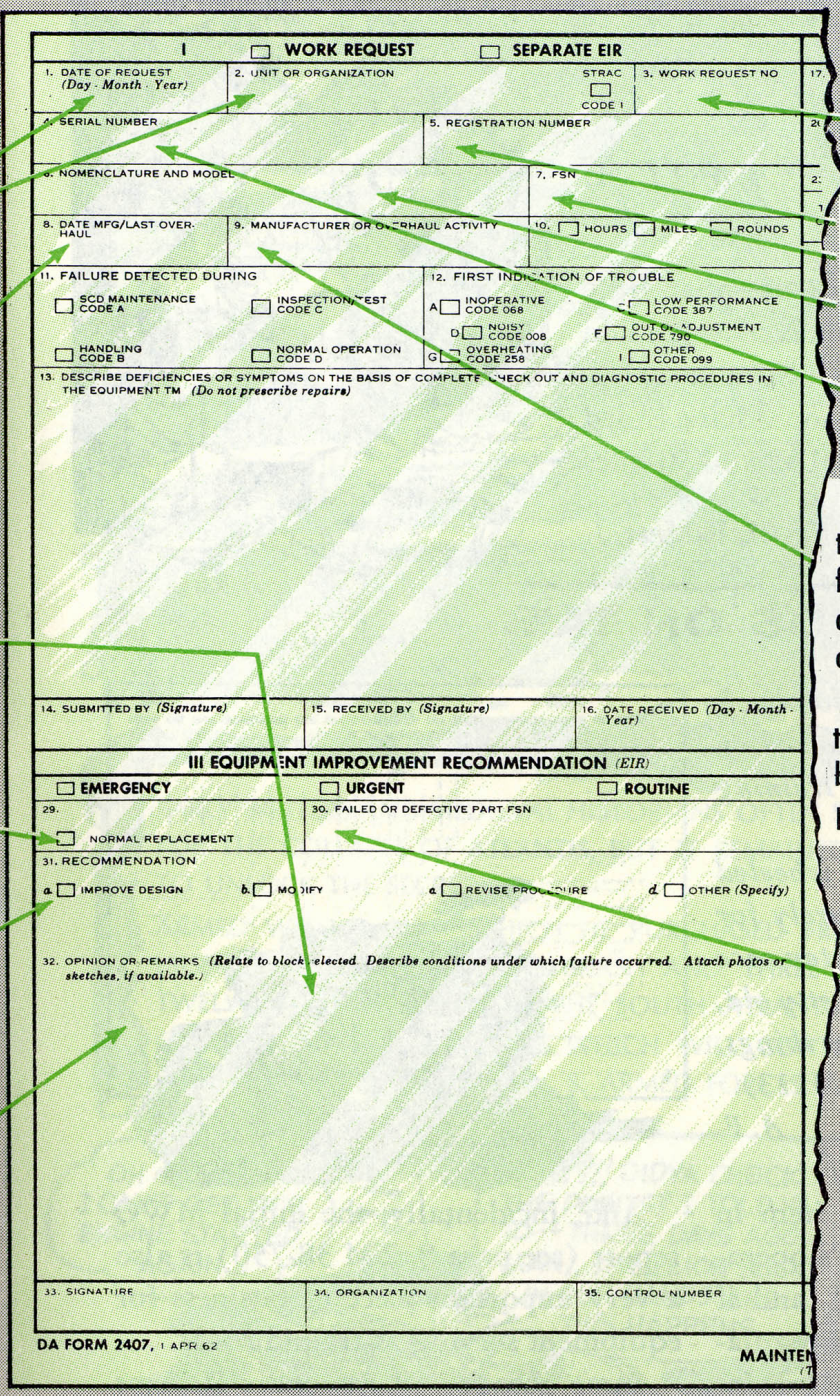
In block 30 put the FSN of defective item if it isn't the same as block 7. If you don't have an FSN, then use the manufacturer's part number.

Now don't be afraid to give your opinion as to why the item is defective. When you can, include exhibits, sketches, or photos to tell the story.

DA Form 2407-1. You have blocks 33 and 34 to put down your John Henry and the name of your outfit.

MENT RECORD SYSTEM

EIR ON EQUIPMENT FAILURES



I ☐ WORK REQUEST ☐ SEPARATE EIR

1. DATE OF REQUEST (Day - Month - Year)
2. UNIT OR ORGANIZATION
STRAC ☐ CODE 1
3. WORK REQUEST NO
4. SERIAL NUMBER
5. REGISTRATION NUMBER
6. NOMENCLATURE AND MODEL
7. FSN
8. DATE MFG/LAST OVERHAUL
9. MANUFACTURER OR OVERHAUL ACTIVITY
10. ☐ HOURS ☐ MILES ☐ ROUNDS
11. FAILURE DETECTED DURING
☐ SCD MAINTENANCE CODE A ☐ INSPECTION/TEST CODE C
☐ HANDLING CODE B ☐ NORMAL OPERATION CODE D
12. FIRST INDICATION OF TROUBLE
A ☐ INOPERATIVE CODE 068 ☐ LOW PERFORMANCE CODE 387
D ☐ NOISY CODE 008 F ☐ OUT OF ADJUSTMENT CODE 790
G ☐ OVERHEATING CODE 258 I ☐ OTHER CODE 099
13. DESCRIBE DEFICIENCIES OR SYMPTOMS ON THE BASIS OF COMPLETE CHECK OUT AND DIAGNOSTIC PROCEDURES IN THE EQUIPMENT TM (Do not prescribe repairs)
14. SUBMITTED BY (Signature)
15. RECEIVED BY (Signature)
16. DATE RECEIVED (Day - Month - Year)

III EQUIPMENT IMPROVEMENT RECOMMENDATION (EIR)

☐ EMERGENCY ☐ URGENT ☐ ROUTINE

29. ☐ NORMAL REPLACEMENT
30. FAILED OR DEFECTIVE PART FSN
31. RECOMMENDATION
a. ☐ IMPROVE DESIGN b. ☐ MODIFY c. ☐ REVISE PROCEDURE d. ☐ OTHER (Specify)
32. OPINION OR REMARKS (Relate to block selected. Describe conditions under which failure occurred. Attach photos or sketches, if available.)
33. SIGNATURE
34. ORGANIZATION
35. CONTROL NUMBER

DA FORM 2407, 1 APR 62 MAINTE

In block 3 you put your unit control number (if you have one).

Then you fill in blocks 5, 6, and 7 with the information about your defective item.

This is the manufacturer's serial number.

Block 9's for the name of manufacturer or support activity doing manufacture or overhaul/rebuild (whichever applies). Look at the identification tag or package for info.

You can usually find the number of the contract the stuff was bought under by looking at the identification tag or package.

In block 30 put the FSN of defective item if it isn't the same as block 7. If you don't have an FSN, then use the manufacturer's part number.

Now don't be afraid to give your opinion as to why the item is defective. When you can, include exhibits, sketches, or photos to tell the story.

DA Form 2407-1. You have blocks 33 and 34 to put down your John Henry and the name of your outfit.

ARMY EQUIPMENT RECORD SYSTEM CONT.

CMI FORMS

Dear Half-Mast,

How Come?

TM 38-750, page 23, says DA Form 2404 "Equipment Inspection and Maintenance Worksheet" is for pulling command maintenance inspections. PS 115, page 52, under "As You Were" says it's OK to reproduce the old CMI forms.

CWO J. M.

Dear Mr. J. M.,

Both are correct. Only thing is—that little note on page 52, PS 115, got a bit crowded and somebody accidentally whacked off a few closing words. The last sentence should have ended with . . . reproduce them 'till TM 38-750 goes into effect.

Sgt Half-Mast

LOGS ON TA'S

Dear Half-Mast,

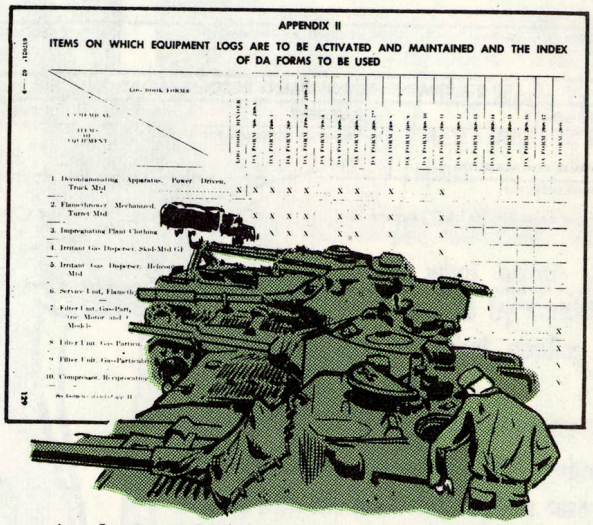
Can you tell me if a regluar log book record (per TM 38-750) is required on items assigned to a school as training aids?

We have a lot of stuff (both wheeled and tracked) which is used purely for instructional purposes (maintenance and operation). Most of it is pretty old, but we have some of the new things, also, (M151, M116, M60 and M113).

A. F.

Dear A. F.,

If it's listed as a log book item in Appendix II, TM 38-750, if it's operational (complete major items), and if your old maintenance SOP and regulations gave it regularly scheduled maintenance and services . . . your TA equipment will need a complete maintenance log record.

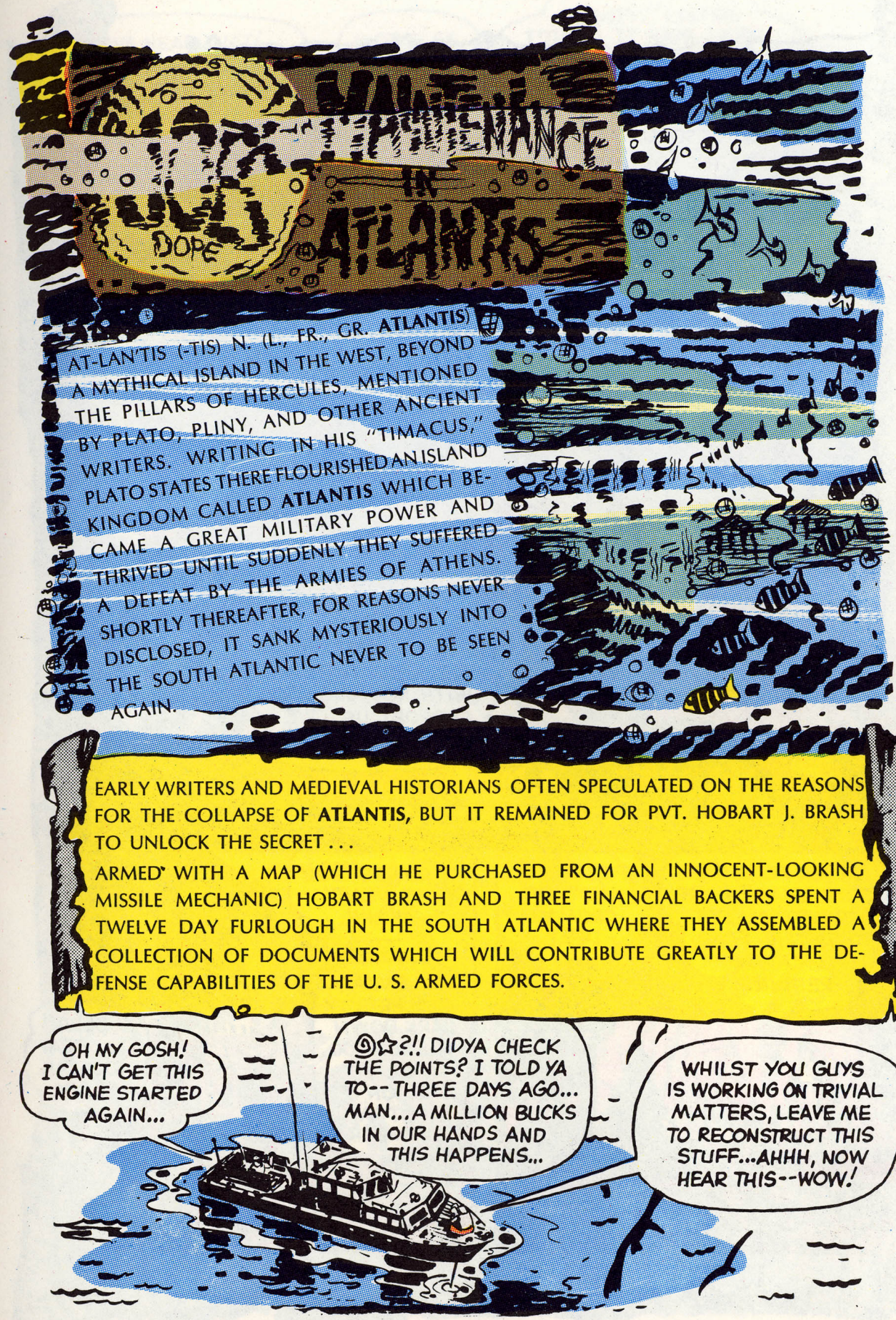

APPENDIX II

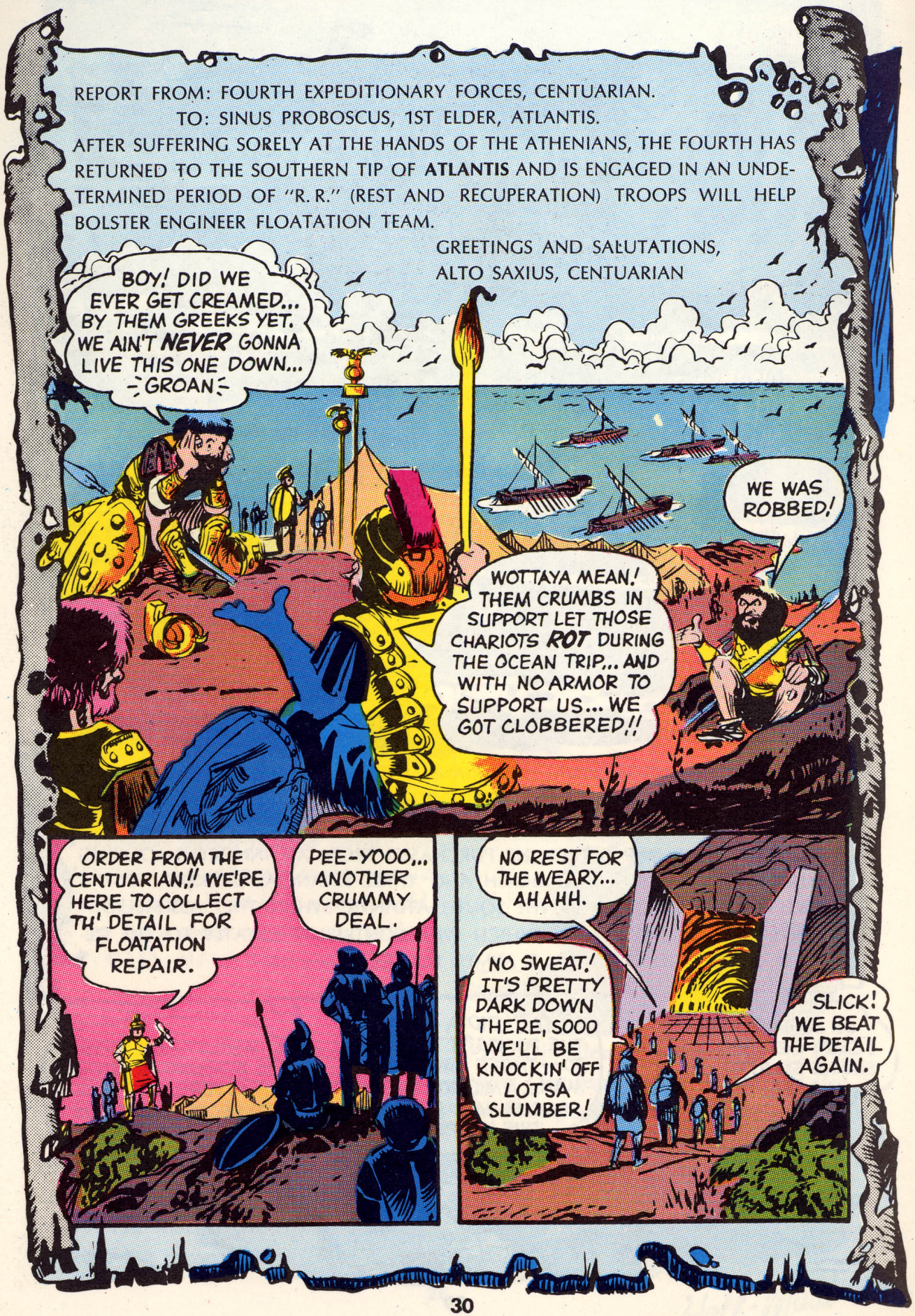
ITEMS ON WHICH EQUIPMENT LOGS ARE TO BE ACTIVATED AND MAINTAINED AND THE INDEX OF DA FORMS TO BE USED

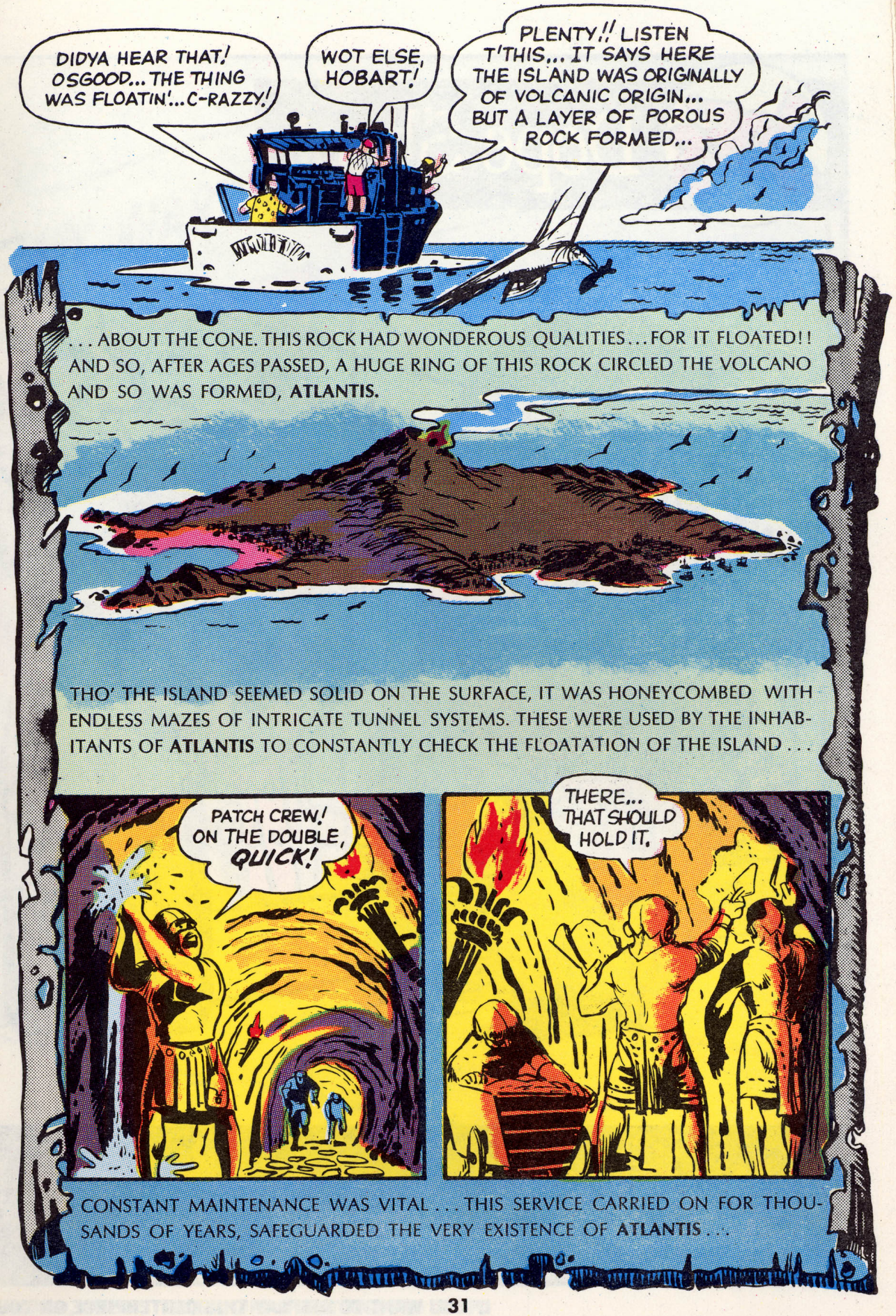
And, incidentally, the initial MWO report (see para 8, TM 38-750) is also a very important piece of business for equipment serving as training aids.

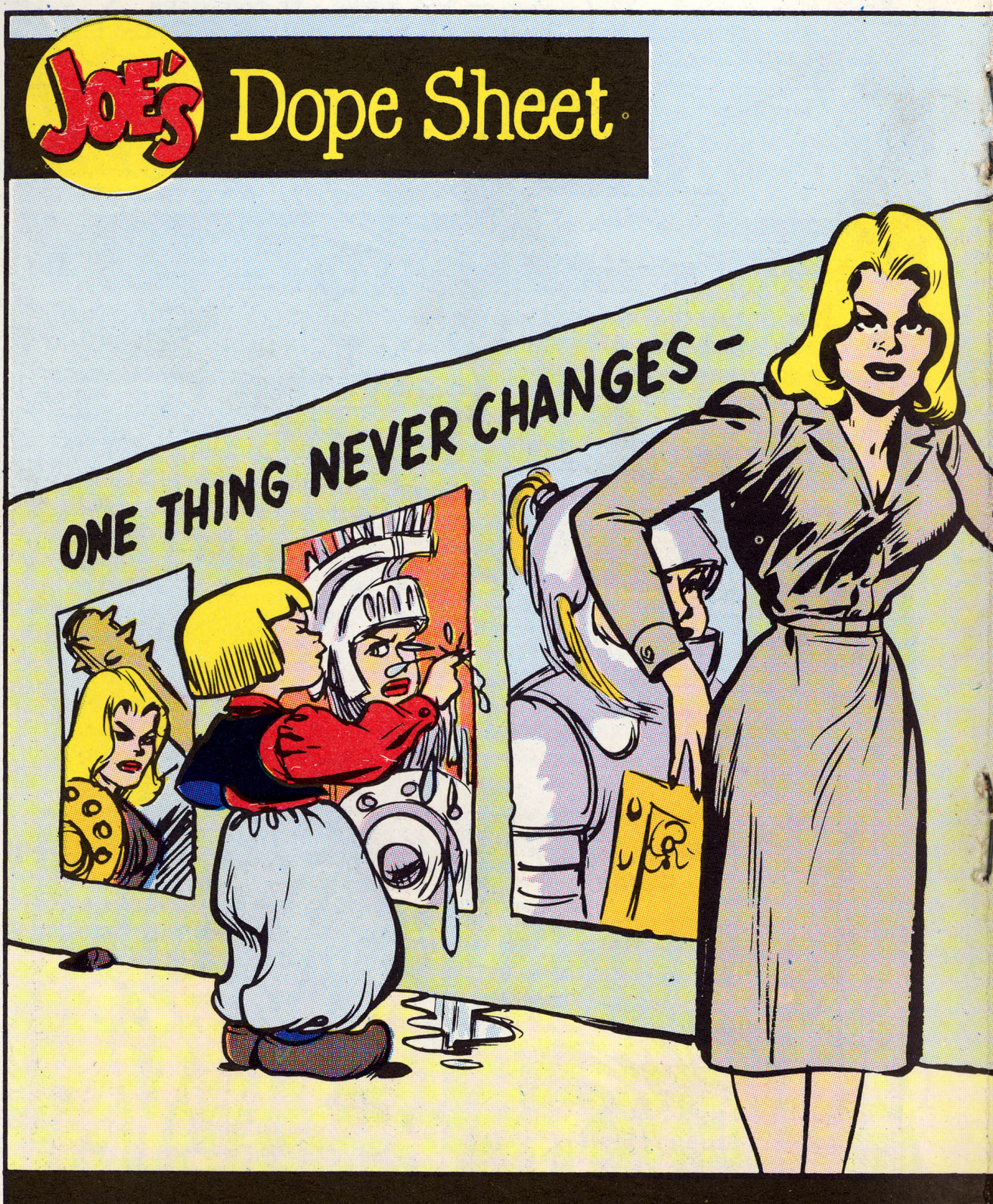
Same goes for all Appendix II items used as support equipment by test, proof or development outfits . . . or anyone else in the Army.

Half-Mast

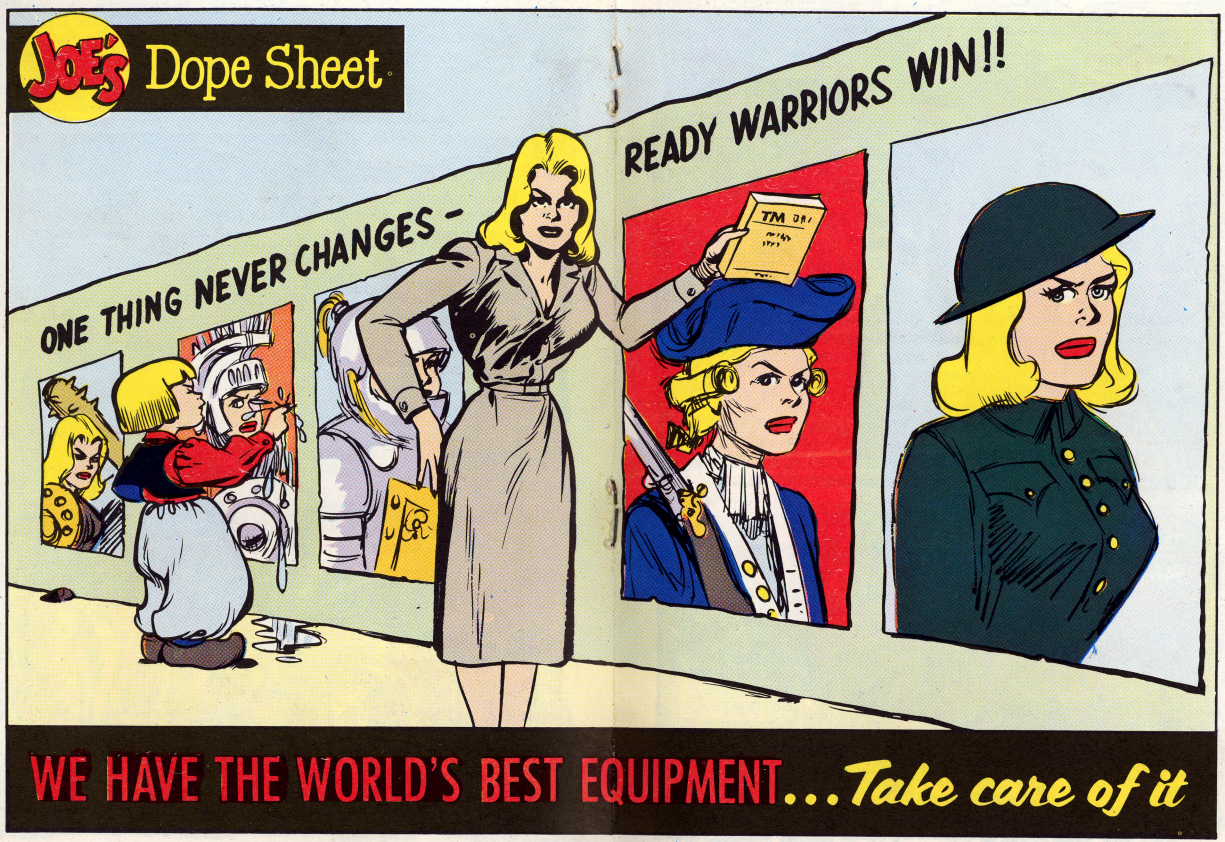

MAINTENANCE
IN
ATLANTIS
DOPE
AT-LAN'TIS (-TIS) N. (L., FR., GR. ATLANTIS) A MYTHICAL ISLAND IN THE WEST, BEYOND THE PILLARS OF HERCULES, MENTIONED BY PLATO, PLINY, AND OTHER ANCIENT WRITERS. WRITING IN HIS "TIMACUS," PLATO STATES THERE FLOURISHED AN ISLAND KINGDOM CALLED ATLANTIS WHICH BECAME A GREAT MILITARY POWER AND THRIVED UNTIL SUDDENLY THEY SUFFERED A DEFEAT BY THE ARMIES OF ATHENS. SHORTLY THEREAFTER, FOR REASONS NEVER DISCLOSED, IT SANK MYSTERIOUSLY INTO THE SOUTH ATLANTIC NEVER TO BE SEEN AGAIN.
EARLY WRITERS AND MEDIEVAL HISTORIANS OFTEN SPECULATED ON THE REASONS FOR THE COLLAPSE OF ATLANTIS, BUT IT REMAINED FOR PVT. HOBART J. BRASH TO UNLOCK THE SECRET . . .
ARMED WITH A MAP (WHICH HE PURCHASED FROM AN INNOCENT-LOOKING MISSILE MECHANIC) HOBART BRASH AND THREE FINANCIAL BACKERS SPENT A TWELVE DAY FURLOUGH IN THE SOUTH ATLANTIC WHERE THEY ASSEMBLED A COLLECTION OF DOCUMENTS WHICH WILL CONTRIBUTE GREATLY TO THE DEFENSE CAPABILITIES OF THE U. S. ARMED FORCES.
OH MY GOSH! I CAN'T GET THIS ENGINE STARTED AGAIN...
@☆?!! DIDYA CHECK THE POINTS? I TOLD YA TO--THREE DAYS AGO... MAN...A MILLION BUCKS IN OUR HANDS AND THIS HAPPENS...
WHILST YOU GUYS IS WORKING ON TRIVIAL MATTERS, LEAVE ME TO RECONSTRUCT THIS STUFF...AHHH, NOW HEAR THIS--WOW!


REPORT FROM: FOURTH EXPEDITIONARY FORCES, CENTUARIAN.
TO: SINUS PROBOSCUS, 1ST ELDER, ATLANTIS.
AFTER SUFFERING SORELY AT THE HANDS OF THE ATHENIANS, THE FOURTH HAS RETURNED TO THE SOUTHERN TIP OF ATLANTIS AND IS ENGAGED IN AN UNDETERMINED PERIOD OF "R. R." (REST AND RECUPERATION) TROOPS WILL HELP BOLSTER ENGINEER FLOATATION TEAM.
GREETINGS AND SALUTATIONS,
ALTO SAXIUS, CENTUARIAN
BOY! DID WE EVER GET CREAMED... BY THEM GREEKS YET. WE AIN'T NEVER GONNA LIVE THIS ONE DOWN... -GROAN-
WE WAS ROBBED!
WOTTAYA MEAN! THEM CRUMBS IN SUPPORT LET THOSE CHARIOTS ROT DURING THE OCEAN TRIP... AND WITH NO ARMOR TO SUPPORT US... WE GOT CLOBBERED!!
ORDER FROM THE CENTUARIAN!! WE'RE HERE TO COLLECT TH' DETAIL FOR FLOATATION REPAIR.
PEE-YOOO... ANOTHER CRUMMY DEAL.
NO REST FOR THE WEARY... AHAHH.
NO SWEAT! IT'S PRETTY DARK DOWN THERE, SOOO WE'LL BE KNOCKIN' OFF LOTSA SLUMBER!
SLICK! WE BEAT THE DETAIL AGAIN.


DIDYA HEAR THAT! OSGOOD... THE THING WAS FLOATIN'... C-RAZZY!
WOT ELSE, HOBART!
PLENTY!! LISTEN T'THIS... IT SAYS HERE THE ISLAND WAS ORIGINALLY OF VOLCANIC ORIGIN... BUT A LAYER OF POROUS ROCK FORMED...
. . . ABOUT THE CONE. THIS ROCK HAD WONDEROUS QUALITIES . . . FOR IT FLOATED!! AND SO, AFTER AGES PASSED, A HUGE RING OF THIS ROCK CIRCLED THE VOLCANO AND SO WAS FORMED, ATLANTIS.
THO' THE ISLAND SEEMED SOLID ON THE SURFACE, IT WAS HONEYCOMBED WITH ENDLESS MAZES OF INTRICATE TUNNEL SYSTEMS. THESE WERE USED BY THE INHABITANTS OF ATLANTIS TO CONSTANTLY CHECK THE FLOATATION OF THE ISLAND . . .
PATCH CREW! ON THE DOUBLE, QUICK!
THERE... THAT SHOULD HOLD IT.
CONSTANT MAINTENANCE WAS VITAL . . . THIS SERVICE CARRIED ON FOR THOUSANDS OF YEARS, SAFEGUARDED THE VERY EXISTENCE OF ATLANTIS . . .



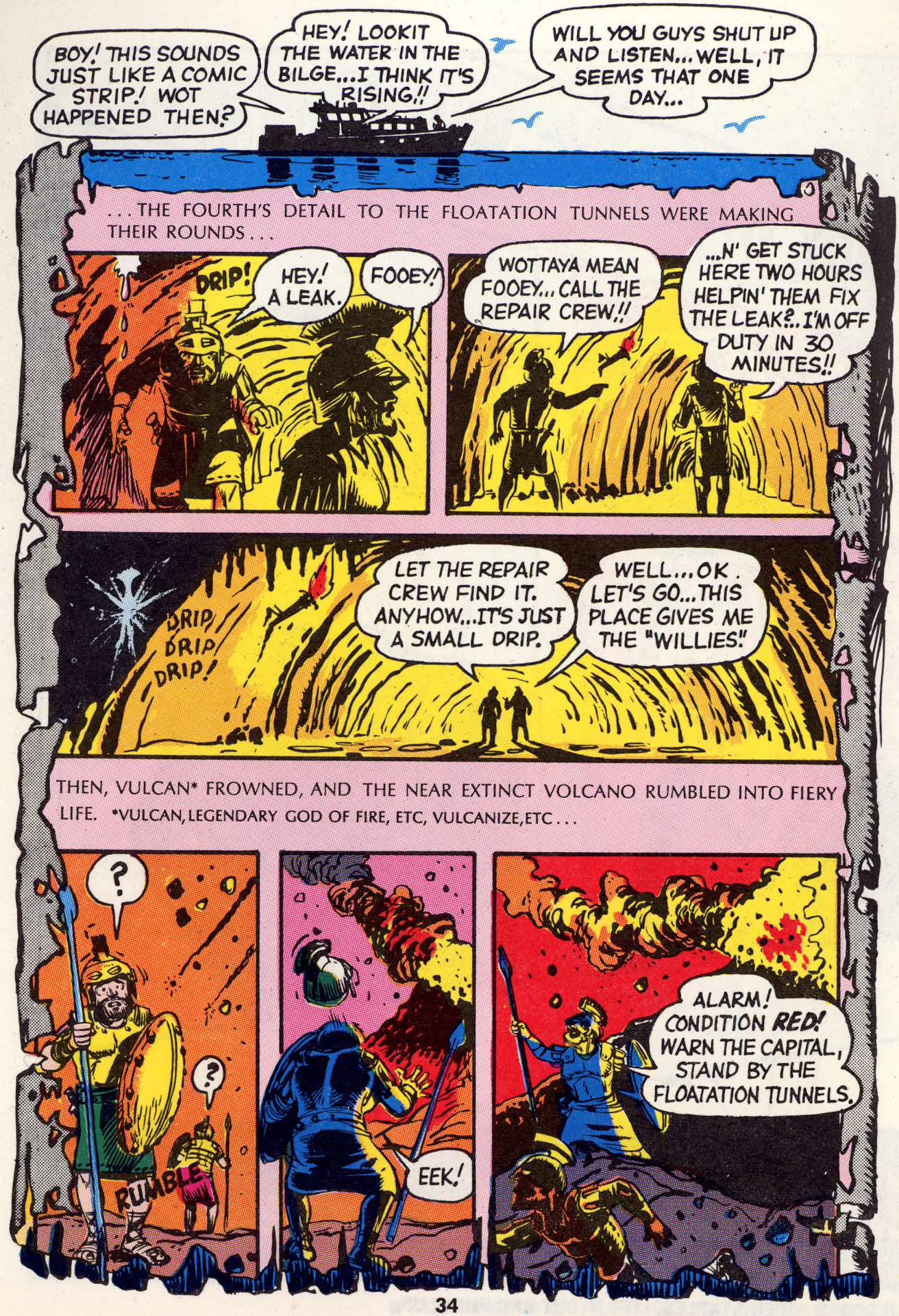
IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BUL



IF YOU WANT TO DISPLAY THIS CENTERPIECE ON YOUR BULLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.

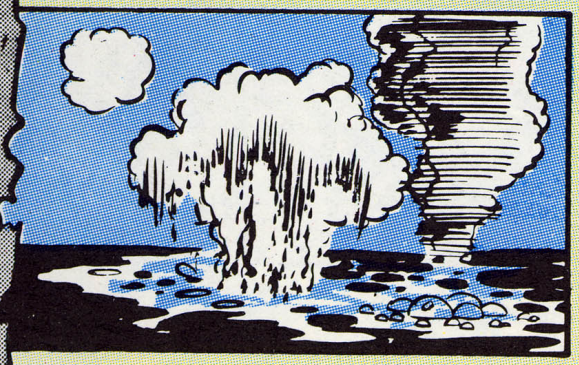
QUIPMENT...*Take care of it*

LLETIN BOARD, OPEN STAPLES, LIFT IT OUT AND PIN IT UP.


BOY! THIS SOUNDS JUST LIKE A COMIC STRIP! WOT HAPPENED THEN?
HEY! LOOKIT THE WATER IN THE BILGE...I THINK IT'S RISING!!
WILL YOU GUYS SHUT UP AND LISTEN... WELL, IT SEEMS THAT ONE DAY...
...THE FOURTH'S DETAIL TO THE FLOATATION TUNNELS WERE MAKING THEIR ROUNDS...
DRIP!
HEY! A LEAK.
FOOEY!
WOTTAYA MEAN FOOEY... CALL THE REPAIR CREW!!
...N' GET STUCK HERE TWO HOURS HELPIN' THEM FIX THE LEAK?.. I'M OFF DUTY IN 30 MINUTES!!
DRIP DRIP DRIP!
LET THE REPAIR CREW FIND IT. ANYHOW...IT'S JUST A SMALL DRIP.
WELL... OK. LET'S GO...THIS PLACE GIVES ME THE "WILLIES!"
THEN, VULCAN* FROWNED, AND THE NEAR EXTINCT VOLCANO RUMBLED INTO FIERY LIFE. *VULCAN, LEGENDARY GOD OF FIRE, ETC, VULCANIZE, ETC...
?
?
RUMBLE
EEK!
ALARM! CONDITION RED! WARN THE CAPITAL, STAND BY THE FLOATATION TUNNELS.

WHAM!!
QUICK! OPEN THE OUTER DOORS.
-:GRUNT!:- CAN'T, SIR, THEY'RE STUCK!
CHECK THE HINGES!
SIR... HINGES ARE RUSTED TIGHT!! NO SIGNS OF LUBE!
BUST 'EM LOOSE, MAN! QUICK...
MEANWHILE IN THE TUNNELS, COUNTLESS WEAK SPOTS, LEFT UNNOTICED BY YEARS OF GOOFING OFF, SPRUNG!!! TRIGGERED BY THE VOLCANIC QUAKES.
YAHHHHH
GUSH!
AS THE OCEAN POURED INTO THE LABYRINTHS . . . THE DOORS WERE FINALLY FORCED OPEN.
CREEEAK!
GADS! WATER...
INSIDE! MAN TH' PUMPS. OR ALL IS LOST!
-:GASP:- WOOD'S ROTTED! HANDLE'S BROKE OFF... WE'VE HAD IT!!
CRACK
HEY!! WE'RE SHIPPING WATER...

THE OCEAN RUSHED THROUGH THE TUNNELS AS THE ISLAND SHUDDERED. **THEN** . . . POURING INTO A FISSURE OF THE BLAZING VOLCANO, THE COLD WATER HIT THE FLAMING LAVA . . . SUPERHEATED STEAM ROARED . . . THE ISLAND . . .



. . . SPLIT APART AND SANK INTO THE OCEAN AMID BELCHING SMOKE AND THUNDERING EXPLOSIONS . . . **ATLANTIS** . . .

...SIGH... THERE IS A LESSON FOR ALL US SOLDIERS IN THIS... IT PROVES SIMPLY THAT MAINTENANCE IS EVERYBODY'S JOB!

...THAT, GOOD MAINTENANCE PRACTICES ARE A FULL TIME THING... A LOT OF LITTLE FULL-TIME THINGS UPON WHICH BIG THINGS DEPEND!

HEY... WOT HAPPENED, WE'RE SUNK!

...SOME JOB O' MAINTENANCE YOU DONE ON OUR BOAT!

AWRIGHT AWRIGHT AWRIGHT

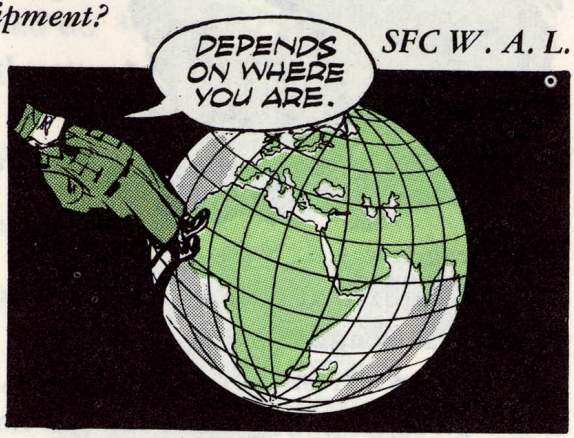
GOOD THING I MAINTAINED THIS RADIO LIKE THE TM SAID...

EASY ANSWER

Dear Half-Mast,

Now that we have the MPLL, can we drop DA Form 2063R? Also, will there be MPLL's for other equipment?

SFC W. A. L.



Dear Sergeant W. A. L.

You're not quite that lucky, Sarge. That MPLL's now called Consolidated Authorized Organizational Stockage List of Repair Parts for Tank-Automotive Materiel, TM 9-2300-223-20P, (13 Mar 62), but it still covers only tank-automotive materiel.

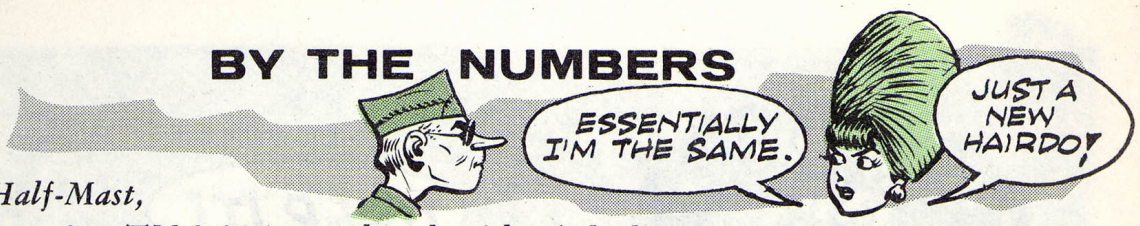
The DA Form 2063R's still used if required by your major (US or Overseas) command, even on tank-automotive materiel. The latest word on this is in Para 30c of AR 735-35 (16 Mar 62). Your command may allow you to choose either DA Form 2063R, the visible file, or some other suitable form.

If they tell you to use DA Form 2063R, you may need to reproduce it locally since it's no longer listed in DA Pamphlet 310-2 (blank forms index).

Right now there's only the tank-automotive Consolidated Authorized Organizational Stockage List of Repair Parts (alias MPLL) in TM form. Haven't heard of any being planned on other equipment.

Half-Mast

BY THE NUMBERS



Dear Half-Mast,

Change 3 to TM 9-325 says that the title of the basic TM should be changed to read: "Operator and Organizational Maintenance Manual: 105-MM Towed Light Howitzer, M101, M101A1."

What does this mean in the way of changes in model designations and data plates?

Sgt D. M.

Dear Sergeant D. M.,

You won't see any difference in the model designations and data plates for the major components—like the cannon, carriage and recoil mechanism. And there won't be a data plate showing either M101 or M101A1.

The only time you use the M101 and M101A1 model designations is when the major combination—complete with the equipment—is involved. When you're talking the components, you use their own identification.

Half-Mast

FRESH FRIED OIL HOSE

Dear Half-Mast,

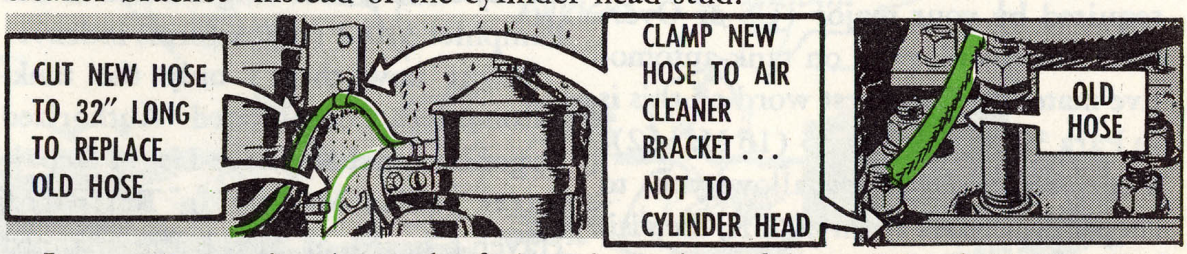
Heat from the exhaust manifold keeps cooking the oil hose that runs from crankcase to filter on our Hol-Gar CE55-AC/WK6 5KW generator. If the hose starts leaking, it may start a fire, or the oil level may drop low enough to damage the engine. What do we do?

SFC J. L. S.

Dear Sergeant J. L. S.,

Here's a fix that'll move that oil hose away from the hot spot at the corner of the Hol-Gar engine.

Order up a fresh 3-ft hunk of Hose, FSN 4720-289-5213 (Eng). Cut and fit it to a 32-in length. Then install this hose line with the clamp attached to the air cleaner bracket—instead of the cylinder head stud.



In case you can't salvage the fittings from the old hose, FSN 4730-362-6656 (Eng) gets you the swivel, and FSN 4730-202-9381 (Eng) gets you the adapter. The loop clamp is a commercial item.

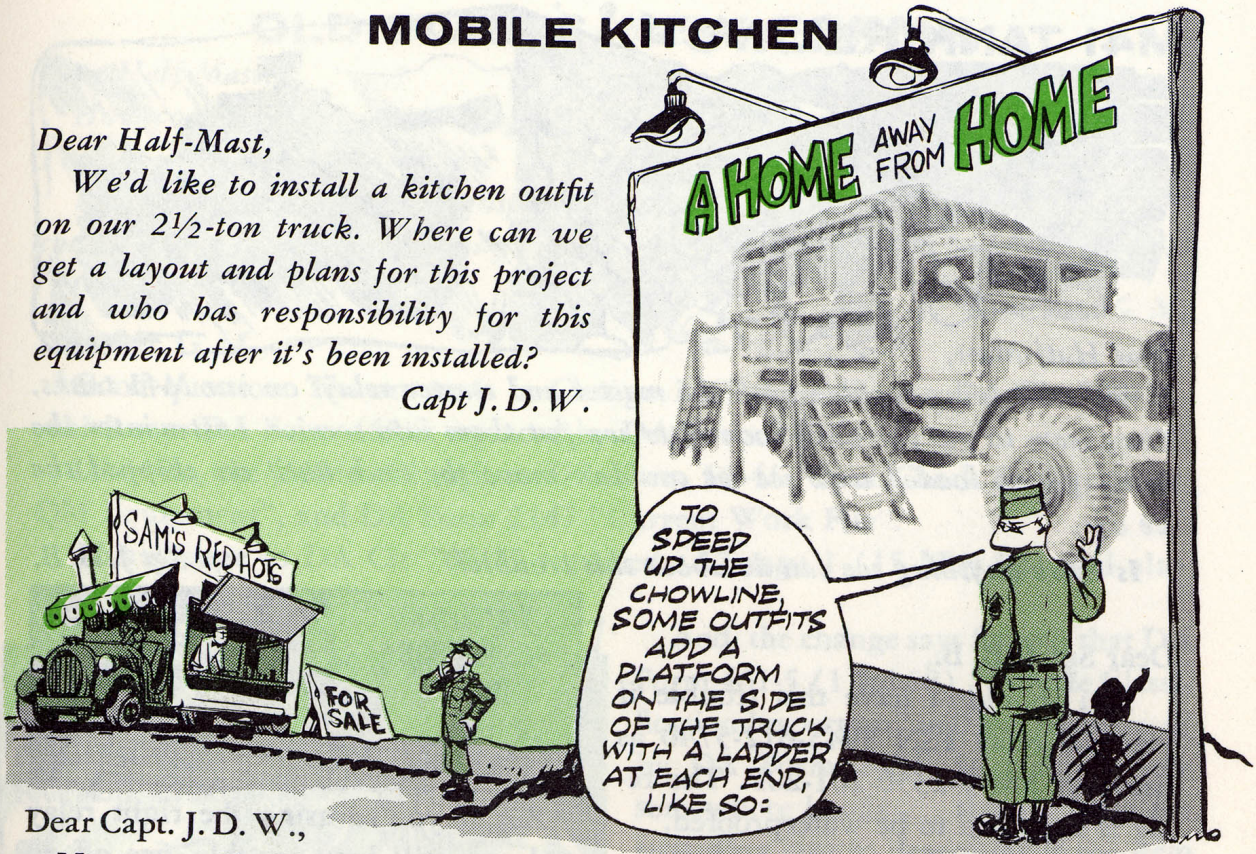
Half-Mast

MOBILE KITCHEN

Dear Half-Mast,

We'd like to install a kitchen outfit on our 2½-ton truck. Where can we get a layout and plans for this project and who has responsibility for this equipment after it's been installed?

Capt J. D. W.



Dear Capt. J. D. W.,

No sweat, Sir. You'll find full-scale plans for a mobile kitchen in para 60 of TM 10-405 (Sep 57)—Army Mess Operations. But if you just want to add a couple-three field ranges in a truck, take a peek at para 25 in TM 10-701 (Jul 57)—Range Outfit—M-1937.

Anyway, the kitchen equipment will remain Quartermaster's responsibility and the truck will still be Ordnance's baby.

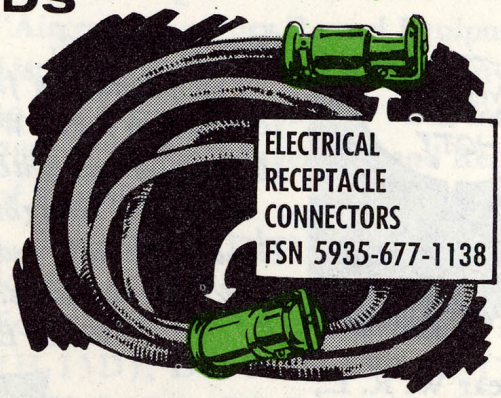
Half-Mast

NEW ENDS

Dear Half-Mast,

We have Slave Cable Assembly FSN 4910-474-9135 (an Ordnance supply item) and our problem is that the end terminals accidentally get run over and are smashed. How can we get replacements?

PFC C. L. M.



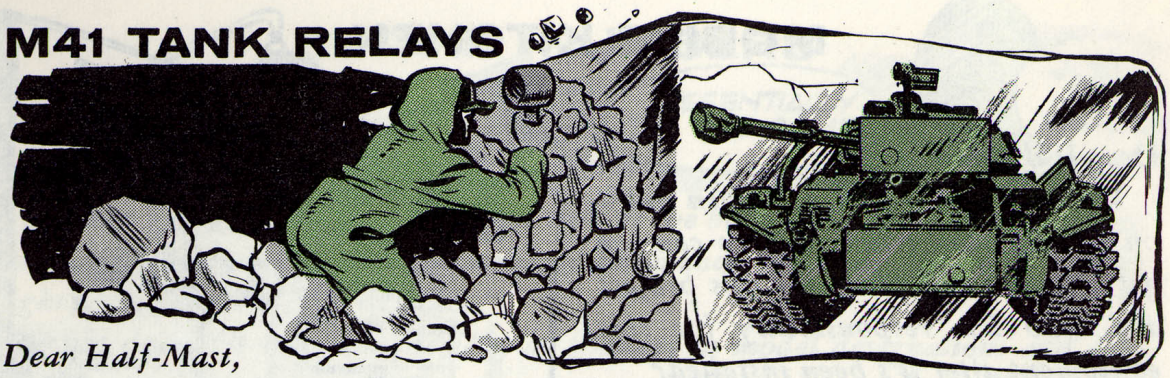
Dear C. L. M.,

Requisition "Connector Receptacle, Electrical", FSN 5935-677-1138. It's a Signal item.

The connector assembly (or slave cable terminal as it's usually called) is not listed in any organizational parts supply manual but it is available when you justify your need.

Half-Mast

M41 TANK RELAYS



Dear Half-Mast,

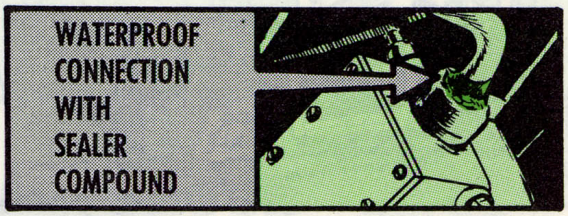
We are having trouble with the master and starter relays on our M41 tanks. They seem to get corroded soon after we put them into service. Last winter the relays got so loaded with ice we couldn't move the tank until we chipped the ice out.

Is there anything we can do about this trouble? *Sgt J. B. B.*

Dear Sgt J. B. B.,

You shouldn't have this trouble if you use relay FSN 5945-612-5740 as listed in TM 9-2350-201-20P. The relay is supposed to be waterproofed.

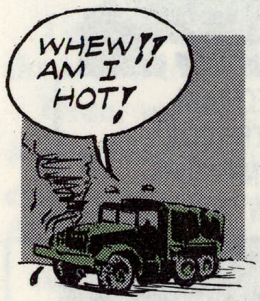
If you have to use some substitute relay, gook it up with sealer compound like it says to in TB ORD-581 (Sep 54).



But if you're using the right relay and you still have trouble, fire off an EIR every time it happens. That way the design people will know what's what.

Half-Mast

STRAIGHT DOPE ON FANS



Dear Half-Mast,

I've found the fans on the G742-series 2½-ton trucks installed two ways: With the straight edge of the blades toward the engine and with the straight edge toward the radiator.

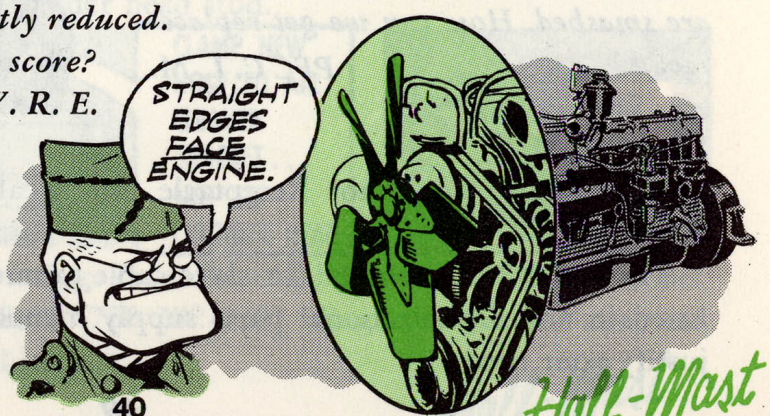
With the straight edge toward the radiator the cooling efficiency is greatly reduced.

What's the score?

W. R. E.

Dear W. R. E.,

By the blades of my fans, the straight edges of the fan point toward the engine. Take a look at Fig. 17 in TM 9-2320-209-20P (Apr 59).



Half-Mast

OLD FORMS/NEW FORMS

Dear Half-Mast,

How come DA Form 465 (Sep 48) "Worksheet for MHE (PM Services and Technical Inspection)" stays in?

I mean, DA Form 2404, "Equipment Inspection and Maintenance Worksheet" can take over for the 465 as easily as it does for any of the other forms it replaces.

Got an answer?

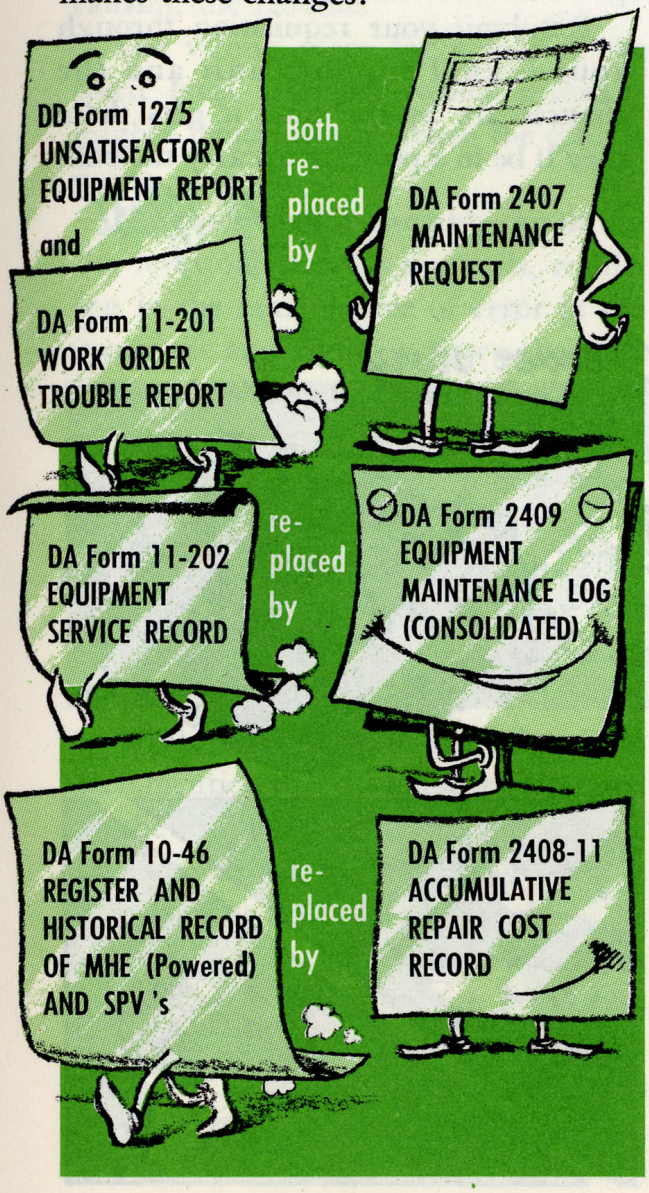
CWO G. M.

Dear Mr. G. M.,

Good question. The answer's in Change 2 (7 Aug 62), to DA Cir 700-15, which says DA Form 465 is replaced by DA Form 2404.

Likewise, the 2404 will replace DA Form 10-41 "Spot Check Inspection of QM Equipment", and DA Form 2147 "Current Work File".

This change to DA Cir 700-15 supersedes Change 1 (15 May 62) and also makes these changes:



And, the change says flat out that DA Form 461-5 (1 Jul 58) "Vehicle Classification Inspection" **will not** be replaced by DA Form 2404. So make a note somewhere handy . . . the old form for recording cost to determine if the item is repaired or salvaged, stays in.

Your nearest publications library should have a copy of the change.

Also, Change 2, DA Cir 700-15 whittles away some aircraft forms. It says DA Form 2408-17 "Aircraft Inventory Record," replaces DD Form 780-1, "Aircraft Inventory Record Equipment List," DD Form 780-2, "Aircraft Inventory Record Shortages," DD Form 780-3, "Aircraft Inventory and Record of Transfers."

The -17 also takes over for the following aircraft inventory records: DD Form 780 (U-1A), DD Form 780 (H-13D), DD Form 780 (L-17A, L-17B, L-17C), DD Form 780 (H-19C, H-19D), DD Form 780 (L-19A), DD Form 780 (L-20A), DD Form 780 (H-21C), DD Form 780 (H-23), DD Form 780 (LC-126A, B and C).

Half-Mast

GIVE IT ANOTHER GO

Dear Half-Mast,

Maybe I've missed something somewhere along the line, but MWO SIG 206 (13 Feb 58) has got me stumped and the inspectors have got me up a tree. This is an urgent modification of antenna bases, towers and other mast structures to include a caution notice about setting 'em up too close to power lines.

I've tried to requisition the caution plates the way it says in the MWO but the only thing I get back is static. What gives?

MSgt J. W. L.

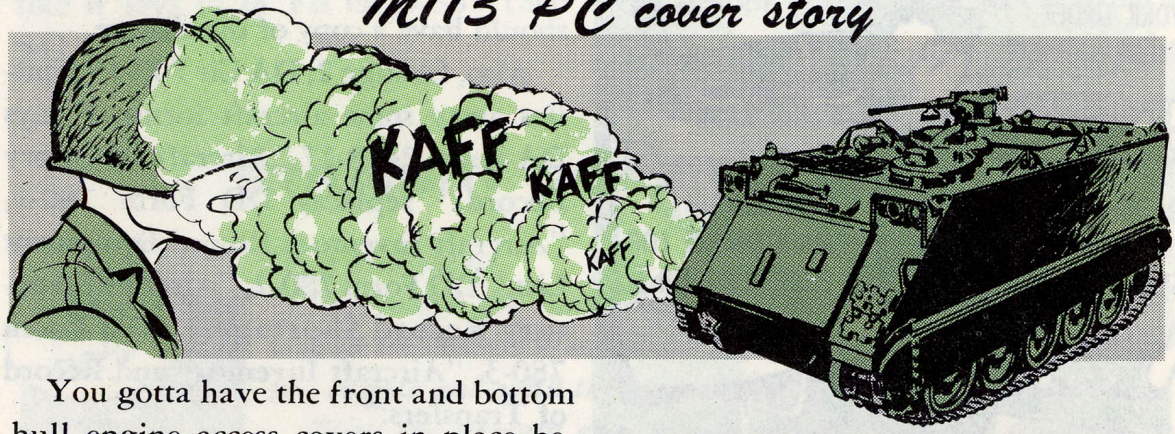
Dear Sergeant J. W. L.,

You haven't missed a thing, Sarge. This MWO hit a snag somewhere and the caution plates sorta faded from supply for a while. But you can expect some action on this real soon.

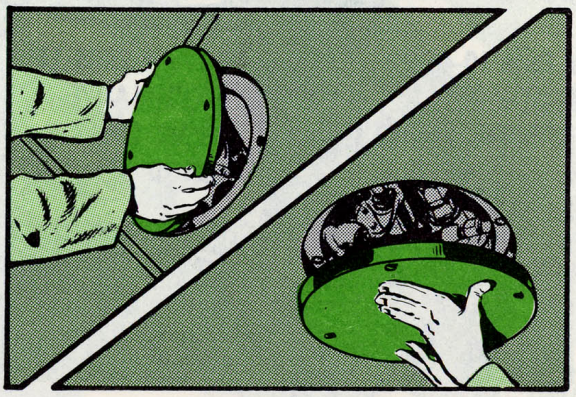
Resubmit your requisition through your Signal support unit and the chances are by the time it gets there they'll be in a position to carry the ball.

Half-Mast

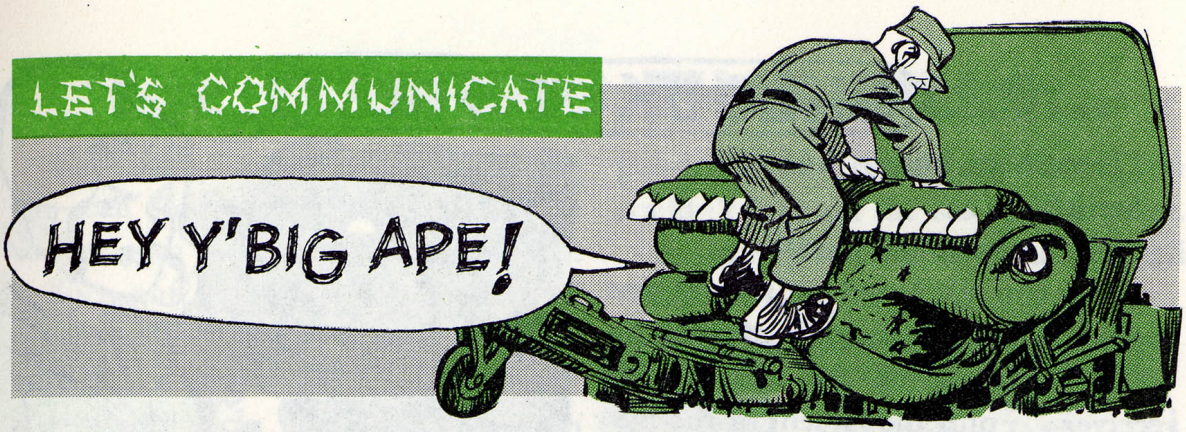
M113 PC cover story



You gotta have the front and bottom hull engine access covers in place before you start your M113 PC. If you leave one of them out, your engine is likely to overheat. This is because the cooling air circulating in the engine compartment is lost when it goes out through a hole that shouldn't be there. The dope on buttoning down these covers is on page 219 of TM 9-2300-224-20 (Dec 61). 'Nuff said?



LET'S COMMUNICATE



ONE FALSE STEP AND...

Dear Editor,

One big foot in the wrong place on the AN/MPQ-4A radar set can really foul up the operation. And the tough thing is, you may never know what's causing the trouble.

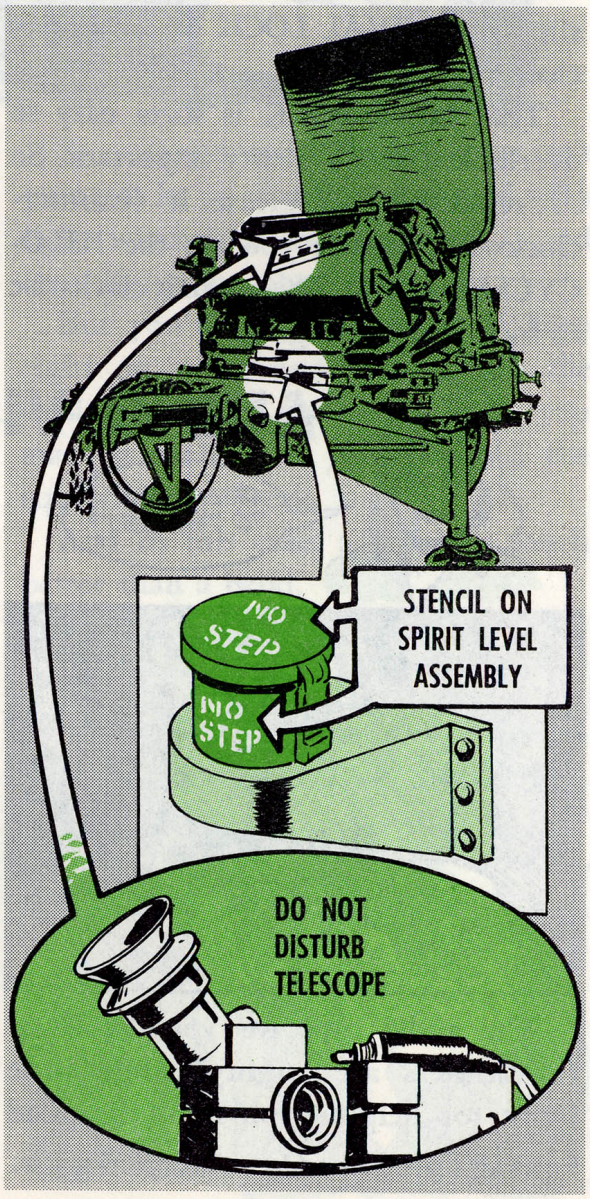
The wrong place for a foot is the spirit level assembly—which makes a mighty tempting step when the cover's down.

But a step on this assembly can throw the level off three to five mils, resulting in the same degree of error in the computer and right on down the line. It usually shows up in elevation.

Once the level is knocked out of whack, the entire set has to be worked over—way, way back.

To help head off this damaging miscue, we stencil the words "NO STEP" on the front of the level and on the cover.

While I'm on the subject, I may as well mention that the telescope mounted on the scanner must never be disturbed in any way. If the mounting plate is taken off, or the telescope loosened, the set is thrown out of alinement and again you're in for a recalibration job a way, way back yonder someplace.



Jerry Collins
Tobyhanna Army Depot, Pa.

(Ed note—No truer words. Thanks.)

UNLOCK IT FIRST!

"Easy there, buddy. EASY!!!"

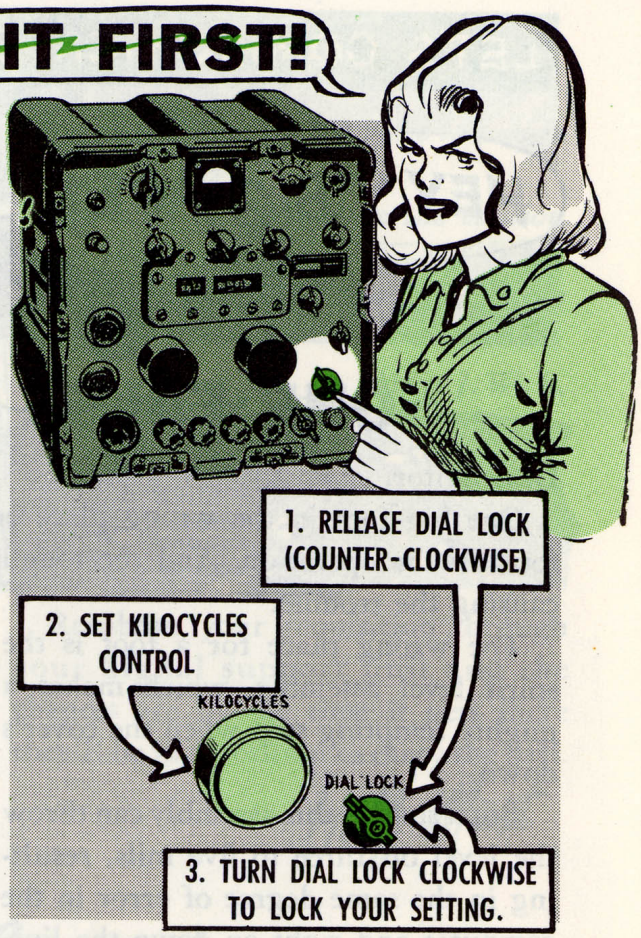
Scriitch. . . .

"Oh, f'r cryin' out loud!"

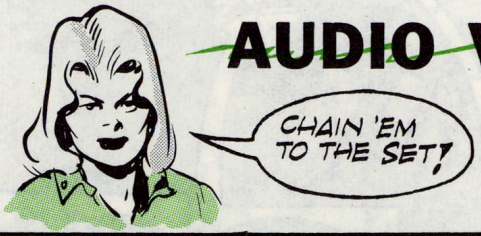
What you just heard, radio fans, was the life and death struggle of a KILOCYCLES control on the R-392/URR receiver . . . plus the lament of the mechanic man who has to repair it.

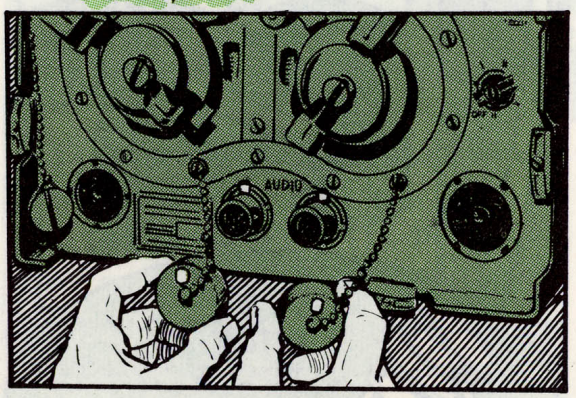
What happened was a strong-fingered operator put the pressure on the KILOCYCLES control without unmarrying the DIAL LOCK from it. He shoulda slipped the DIAL LOCK off (counterclockwise) first.

That DIAL LOCK is sorta easy to overlook, but it's plenty important. So . . . remember to release it (counterclockwise) before you set the KILOCYCLES control. Then turn it clockwise to lock your setting.



AUDIO VISUAL AID





The audio caps for your receiver-transmitters are mighty handy little items for helping you fight the good fight against dust, dirt, water and gook.

So handy, in fact, that most of 'em were chained to the set—to start with, at least.

Since they're a little tricky to put on the connectors, the shrewd operators take no chances. With the cap in the correct position, they put a dab of white enamel paint on the connector and the cap so they can line 'em up and slip the caps on easy—even in the dark.

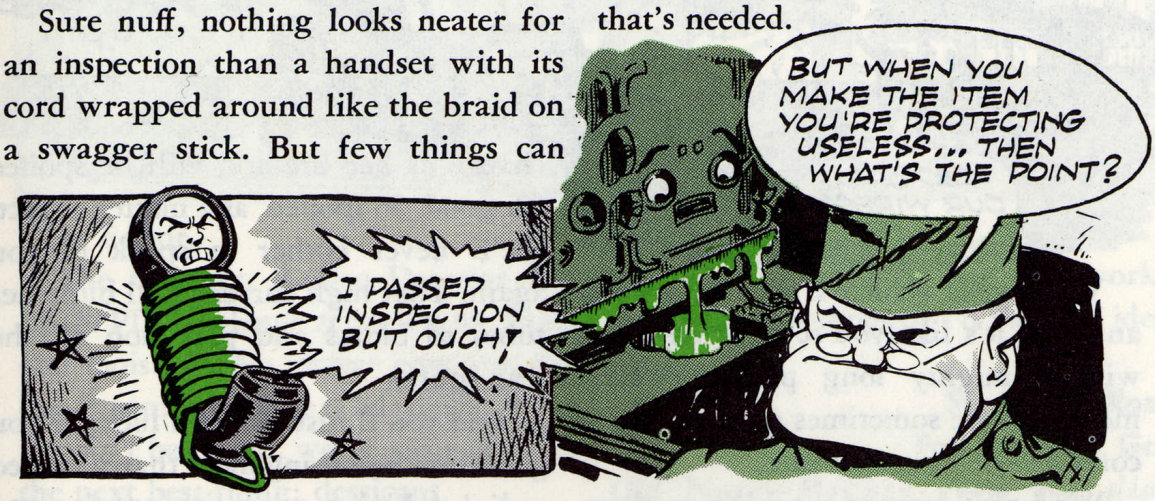
And when they find the chain is hanging down below the chassis — where it can get pinched by the mounting—they practice a little PM. They anchor the chain at another position — like on the TUNE-ON-OFF switch, for example.

Shrewd operators.

THE KINDNESS THAT KILLS...

Neatness—like any other shining virtue—can sometimes be carried a little too far with your communications gear.

Sure nuff, nothing looks neater for an inspection than a handset with its cord wrapped around like the braid on a swagger stick. But few things can damage the cord or equipment as much.



Wires, cords and cables are meant to carry the message—not a lot of stress and strain brought about by sharp bends and tight wrapping. Inspections are made to see if the equipment is combat ready, remember? Seems sorta silly, doesn't it, for it to take a beating in the process?

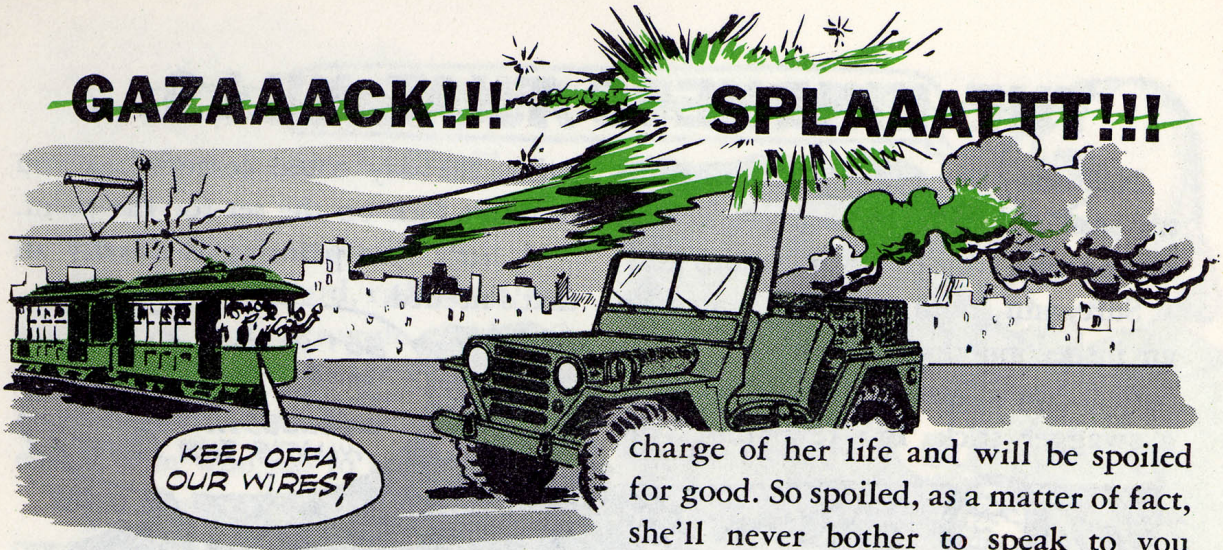
Take vehicle radio mounts as another example. They need to be protected, of course. And paint is a mighty good protector. But if the entire mount is painted every time there's a little scratch in the paint, the day could come when you couldn't lock on the set for the paint.

A little spot painting is usually all that's needed.

So... easy does it. The inspector isn't going to be powerfully impressed with tight windings... rubber bands... and beautiful paint jobs.

But you're going to have to keep right on using and maintaining the equipment after he leaves... so you may as well give yourself—and the equipment—a break.

And in this case, a break is much better than a bend.



When your vehicle is sportin' a whip antenna, it's like you're wearing a hat with a mighty long plume. Which means you've sometimes got to stoop to conquer—or communicate.

With that antenna reaching up there 15 feet or so, there're just going to be places you can't go—without tying down the antenna first. And tied down is the way it should be most of the time anyway.

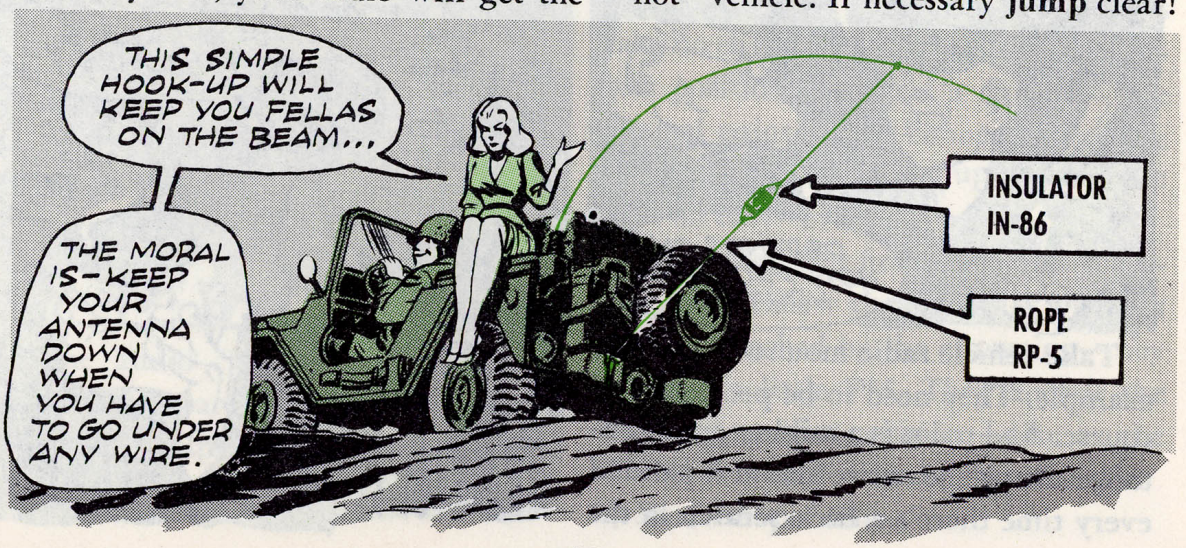
Any kind of overhead obstacle will clobber the antenna. But what you want to be real careful about are power lines, specially naked trolley lines you'll find in a lot of towns.

If your antenna reaches up and kisses a trolley line, your radio will get the charge of her life and will be spoiled for good. So spoiled, as a matter of fact, she'll never bother to speak to you again. That high current will blow her tubes to blazes and play hob all the way round.

And you'll just be plain lucky if you get off with nothing more than a sizzled radio! A high-tension line can fry you and everybody in the vehicle.

So . . . there's just one thing to do. Don't slip the old girl too much antenna. Keep it tied down like your SOP tells you. When it's up there all the way, it's awfully easy to forget just how far it reaches.

If your antenna ever does hit a live wire, to save your own hide, get your vehicle clear before you touch the ground. Never let your body ground a "hot" vehicle. If necessary **jump** clear!



FOR A REAL DRY CHARGER

Dear Editor,

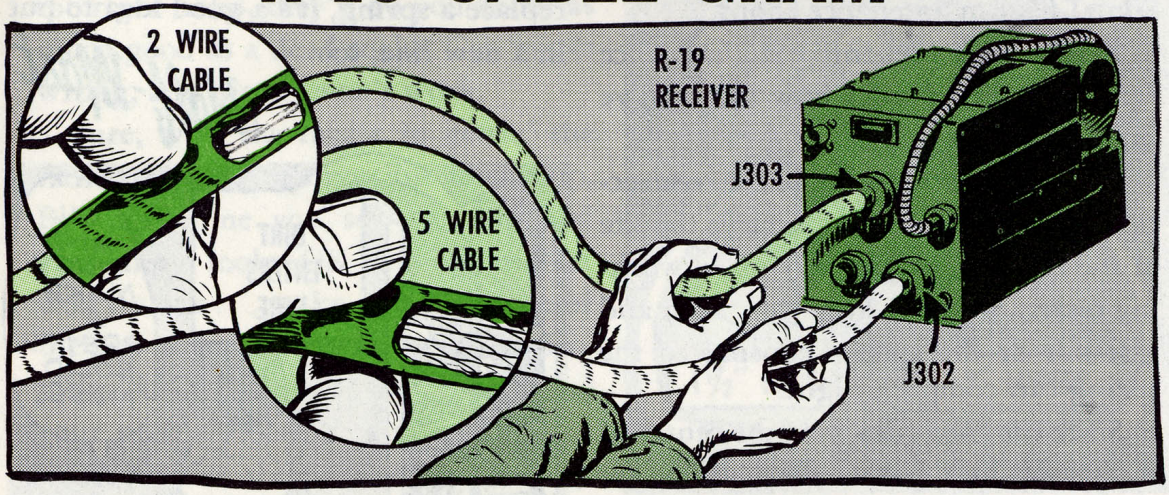
The Charger, Radiac Detector PP-1578/PD is plenty sensitive to water and moisture. No matter how you air-dry it, some moisture is left inside. Since we can't bake 'em, we've come up with the next best thing: dessicant.

We store the charger in a watertight can with a dessicant bag — it works wonders. Just thought I'd pass the idea along.

Sfc John E. Ross
Fort Benning, Ga.

(Ed Note—Mighty glad you did. Thanks.)

R-19 CABLE GRAM



Ever get your R-19 Receiver in Radio Set ARC Type 12 all set up and not hear a word from it?

Next time it happens try a little cable switching before you call for the commo mechanic. If you didn't get 'em connected right at first, the receiver won't work.

Make sure the two-wire connector goes to the J-303 receptacle (top one) and the five-wire job goes to the J-302. The connectors on the cables are interchangeable, so it's easy to get 'em switched.

If the wires are covered it's simple to tell which is which, like so: the two-wire job is thinner, natcherly, and you can feel the number of wires inside. So it's always "Two to the Top."

AT-271 ANTENNA ANTICS

Dear Half-Mast,

I've looked high and low for the nylon-covered steel cable that goes inside the AT-271/PRC antenna for the AN/PRC-8, -9 and -10 radio sets.

Could you give me the FSN for the cable and tell me where to find it?

Sgt E. E. B.

Dear Sergeant E. E. B.,

You'll find the FSN in SM 10-5-4000 (20 Apr 60), only it's no longer a steel cable. It's all nylon cord now, and it goes by FSN 4020-242-4072.

The cord is usually issued in bulk to Signal field maintenance shops.

A few brief preventive maintenance tips might be in order now that you've brought up the subject.

F'rinstance, the spring in the base section of the antenna can preserve the life of the cord . . . just by staying in working order. So try to keep dirt, sand and grit out of the spring housing so the spring can compress right.

Since the cord runs thru the center of the spring to a disk at the bottom, the spring and area around it have got to be clean to let the spring compress when you tug on the cord to fold the antenna.

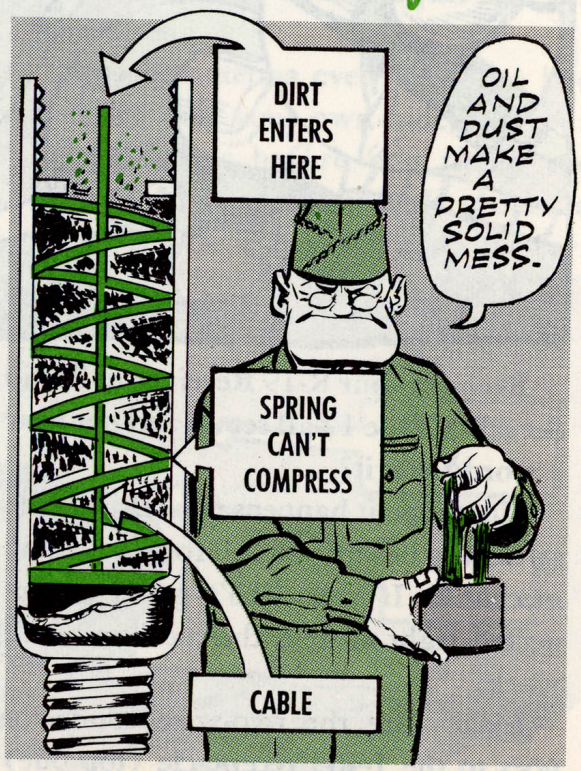
If gook is around the spring, you may tug the cord too hard, bust it, and put the antenna out of business.

It's a good idea to take the antenna apart once in a while and check for grit or rust in the spring housing or around the spring itself. Clean 'em up good.

If the spring is rusted bad, or otherwise fouled up, order a new one from Signal under FSN 5820-663-3330.

One other thing—never use any oil. It'll just bind the gook together and ruin the action of the spring. When you replace a spring, it's a good idea to put in a new line, too.

Half-Mast

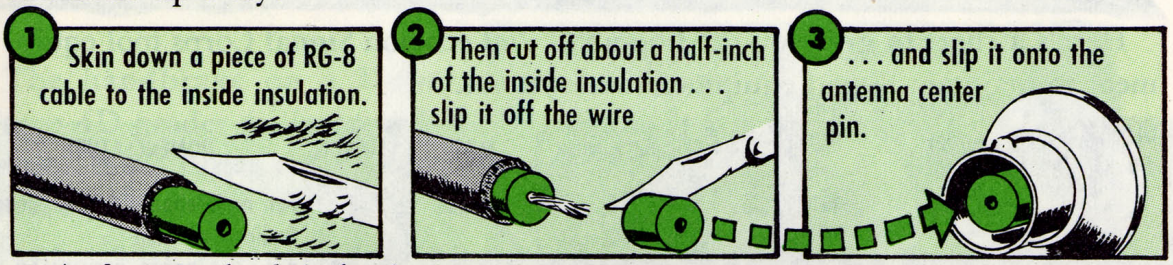


FOR FAIR WEAR AND TEAR

Along about the umpteenth time you couple up to the antenna connector on your RT-68 or RT-70 receiver-transmitter you're likely to draw a blank.

Because that little rubber insulator in there will sooner or later call it quits, pull off, and leave you sorta bare metal-to-metal.

If you don't have time to replace the entire antenna connector, you might give this little tip a try:



And you're back in business.

A CABLE FOR TWO

"Choosy" is the word for cables on the AN/GRC-3 thru 8 radio sets.

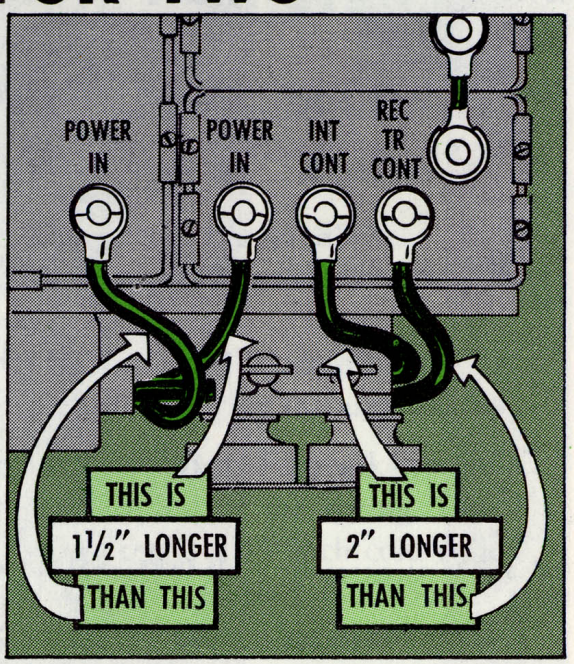
If you don't plug a couple of 'em in the right holes, they'll do you about as much good as a dead snake. Get 'em in wrong, and the set won't work.

Sure, with the hustle in gettin' the radio operating it's possible to slip up. But next time you set up shop and everything looks OK . . . only the set won't work . . . make a quick check of the two lower right hand cables on Amplifier AM-65/GRC. If they're switched your problem may be a simple one. A quick reverse should put you in business.

The cables go to the REC-TR CONTROL and the INT CONTROL. The AM-65/GRC also doubles as the monitor amplifier for the two receiver-transmitters and the auxiliary receiver.

That's what makes proper location of the cables so important.

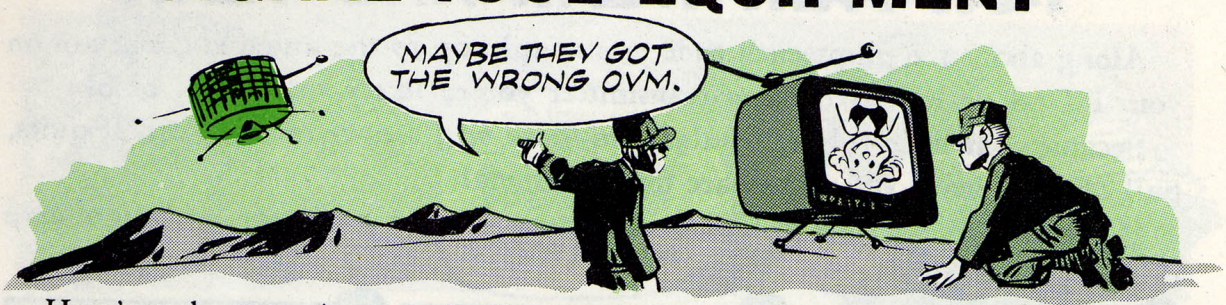
The cables are both Special Purpose WM-46/U's, but the one to the INTER-



PHONE control is easy to spot. It's two inches longer than the one to the RECEIVER-TRANSMITTER control.

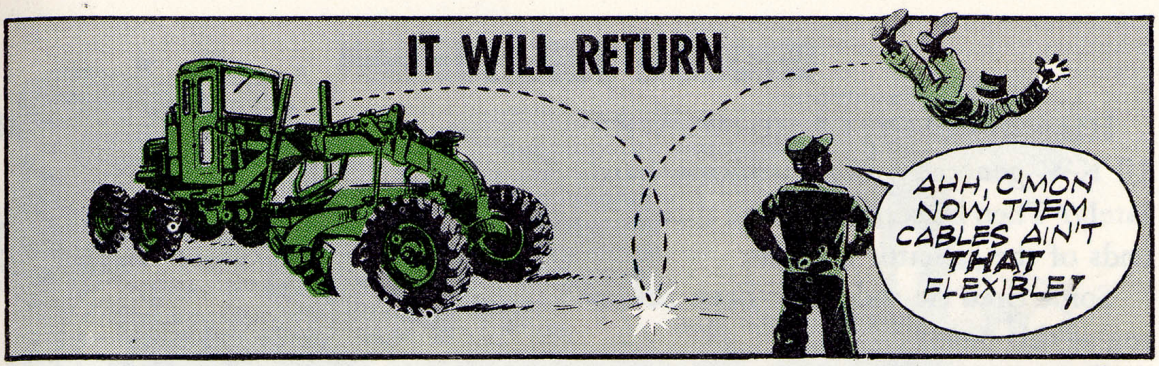
Also interchangeable and adjacent are the POWER IN cables to the Amplifier and the PP-112/GRC power supply for Set 1. To get 'em straight, remember that the cable to the amplifier is 1½ inches longer than the one to the power supply.

SIGNAL TOOL EQUIPMENT



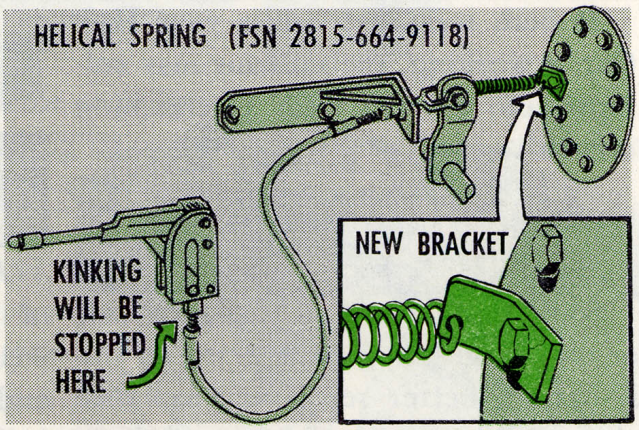
Here's a chart to give you the line-up of 2nd echelon Signal Corps tool equipment to maintain Signal equipment and systems.

OLD SM OR KIT	NEW SM	KIT	FSN	MOS	ECHELON	NOMENCLATURE
		TK-61/SR	5180-356-4614	296.1	2	For maintenance of Shipboard Radio equipment
TE-113 (in part)	11-4-5180-R08	TK-87/U	5180-690-4452	296	2-Radar 3-5 Radio	RADAR & RADIO REPAIRMAN — Issued to individual repairman
TE-113 (in part)	11-4-5180-R12	TK-88/U	5180-893-1389	296	2-Radar 3-5 Radio	RADAR & RADIO REPAIRMAN — C/O powered, non-powered, special and common hand tools
TE-41	11-4-5180-R09	TK-115/G	5180-856-1578	311, 312, 313	2	RADIO REPAIRMAN—C/O general hand tools
	11-4-5975-D01	MK-356/G	5975-657-2183	311, 312, 320	2-5	WIRE SPLICING KIT—to make an insulated splice w/o the use of tape on WD-1/TT wire only
11-4-5805-8465	11-4-5180-R02	TE-21	5180-408-1350	321	2	LINEMAN'S EQUIPMENT — for installing & maintenance of overhead telephone lines
	11-4-5180-R06	TE-23	5180-408-1242	321	2	GROUNDMAN'S EQUIPMENT — individual groundman's wire equipment
	11-4-5180-S08	TE-49	5180-408-1863	331, 323	2-5	For maintenance & repair of telephone & telegraph equipment (Ind).
SIG 6 TE-50	11-4-5180-S05	TE-50-B	5180-356-4602	341	2-5	For repair & maintenance of teletypewriter
	11-4-5180-S01	TE-73	5180-498-8974	238, 641	2	Individual wiremen's tool kit
SIG 6 TE-123	11-4-5180-S07	TE-123	5180-408-1881	294		For repair & maintenance of carrier equipment
	11-4-5180-R03	TK-90/G	5180-542-5812	311, 630 685	2-5	BATTERY SERVICE—repair & maintenance of storage batteries BB-401/U, 403/U, 406/U, 407/U, also all Ni-cad type batteries
	11-4-5180-R05	TK-77/GF	5180-752-9068	401	2-5	PHOTOGRAPHIC REPAIRMAN—for general repairs of photographic equipment
	11-4-5180-S11	TE-5	5180-498-8969	As required	2-5	C/O hand tools for general organizational use, contained in pocket case



The handbrake on a Huber-Warco 4D grader pulls up to ON position a lot easier than it backs down to OFF.

The flexible cable pulls up straight—but it bends and kinks on the down stroke. What it needs is a return spring on the cable—and it doesn't have one right now.



Sooooo . . . just requisition one through your regular Engineer repair parts, supply channels. The helical spring is covered by FSN 2815-664-9118.

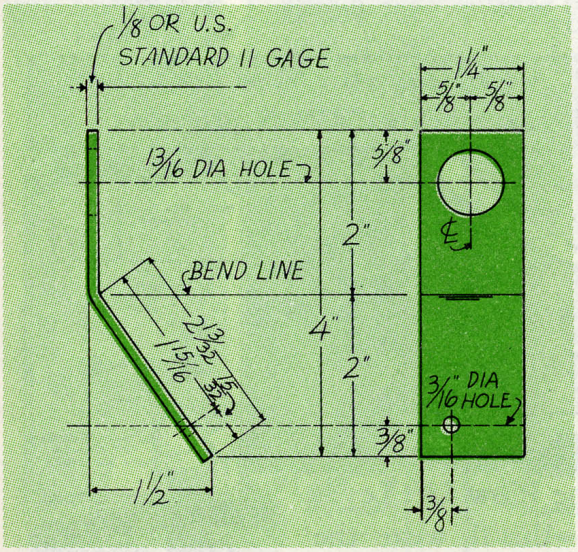
Here's how you put the spring to work . . .

Chock the wheels on your Huber-Warco, then release the handbrake.

Now, you remove the pin that holds the cable yoke to the transmission brake arm.

Then, enlarge the cotter hole in the yoke pin with a No. 23 drill.

Replace the yoke pin, and hook one end of the helical spring through the hole in the pin.



USE COLD ROLLED STRIP STEEL 1¼" x ⅛" x 4 7/16"

Now you need a bracket to hold the tail end of the spring. Cut a strip of 1¼ x ⅛ inch cold rolled steel (FSN 9515-516-5745) to a length of 4 7/16 inches. Then drill it and bend it like it shows in the sketch.

Bolt the bracket to the rear differential cover by its nearest capscrew, and hook the tail end of the spring into the bracket.

Inspect the cable return action while your buddy works the handbrake. Crawl clear and take five. You've knocked the problem.

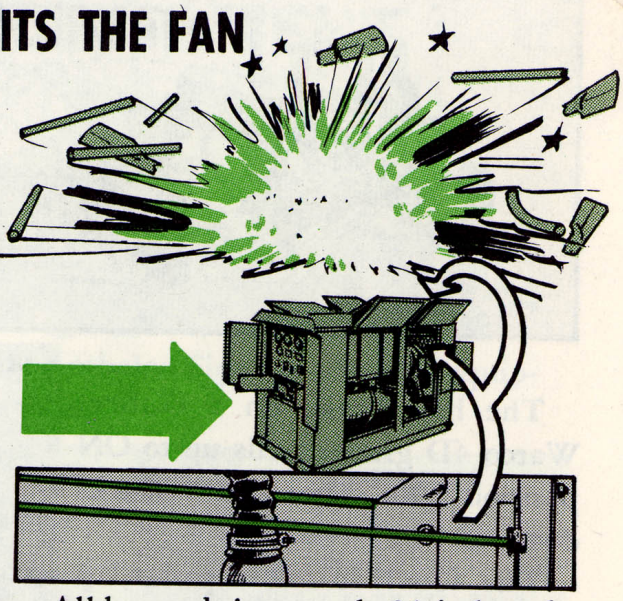
BEFORE IT HITS THE FAN

Has your Hol-Gar CE-105-AC/WK8 10 KW generator been working hard lately? Then better eyeball the threaded ends of the radiator tie rods.

Some tired tie rods have been breaking at this point.

If both rods snap while your Hol-Gar is working, the radiator may collapse into the fan with a screeching crunch.

So if those tie rods are tired, cracked, or otherwise losing their grasp on the situation, better see your mechanic about making a pair of beefier replacement rods.



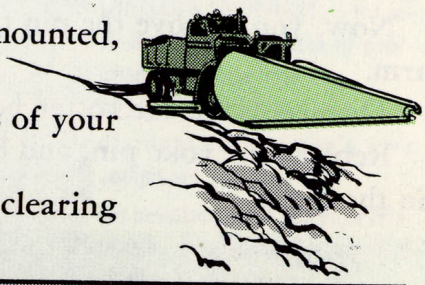
All he needs is a coupla 21-in lengths of ⅜-in cold rolled steel stock, FSN 9510-228-6210 (Eng), with washers and nuts to match. While he's about it, he'll need to ream the tie rod bracket holes to take the new ⅜-in rods.

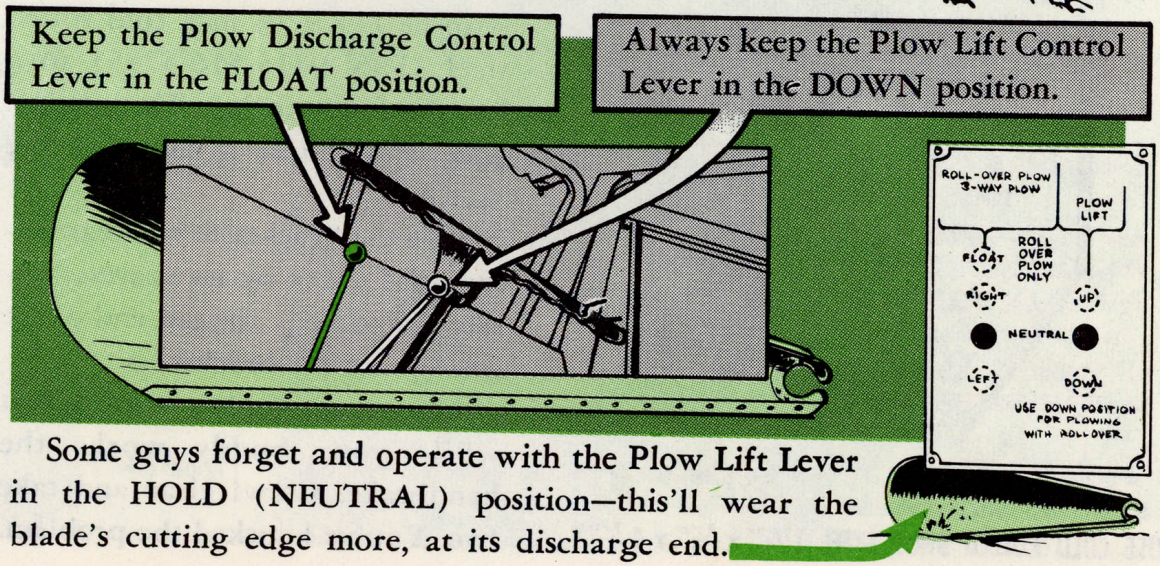
LET 'ER FLOAT

King-size drifts are a pushover for your truck-mounted, hydraulically-controlled Frink RO-10 snowplow.

But, uneven wear and tear on the cutting edges of your blade can make them old before their time.

A couple of things to keep in mind when you're clearing a throughway with the rollover snowplow:





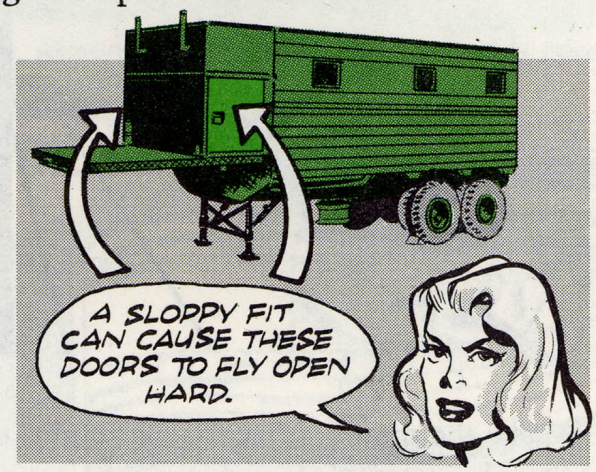
Some guys forget and operate with the Plow Lift Lever in the HOLD (NEUTRAL) position—this'll wear the blade's cutting edge more, at its discharge end.

GOT FLIGHTY DOORS?

Doors that fly open are bad medicine anywhere.

But doors that fly open on a mobile rig like a parts van can be more lethal than a mowing machine.

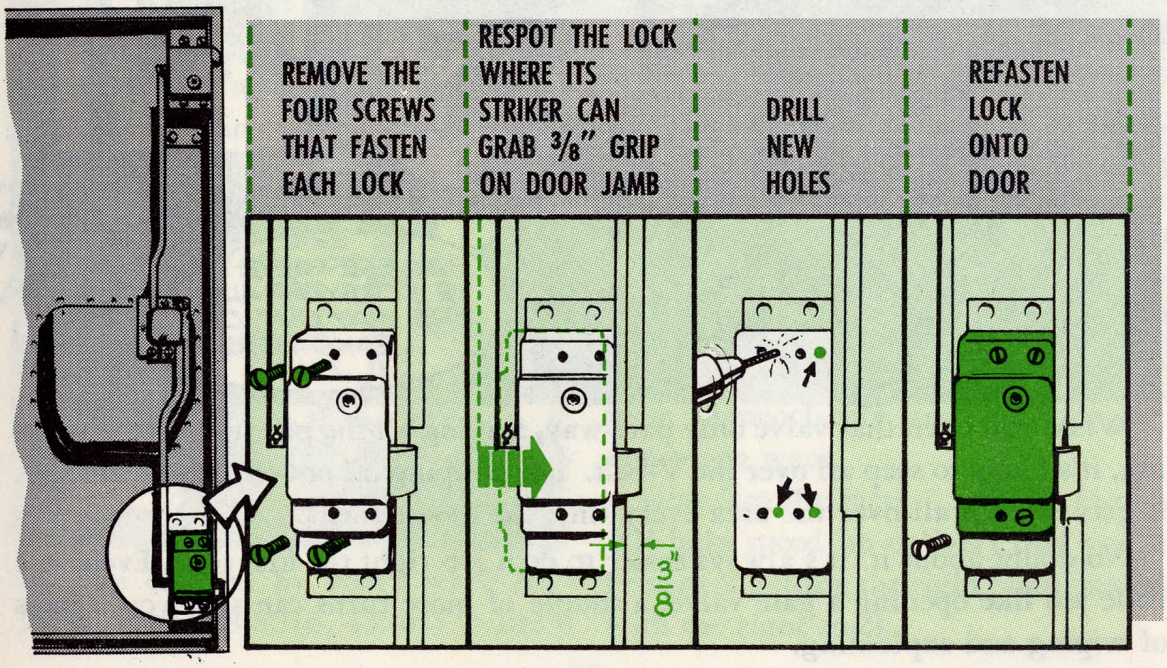
One rig like that could be your Repair Parts Van, FSN 2330-587-2454. With rear-hinged doors on both sides of the front compartment, it's a reaper running wild when those doors fly open on the road.



So it's **before** you travel, while there's a mechanic handy to fix any sloppy fits, that you want to double-check those door locks.

To stay on the safe side, better report any door if its bolt strikers—both top and bottom—don't cover the door jamb with a solid ⅜-in contact.

It's no sweat for a cool mechanic to fix the fit. All he does is—

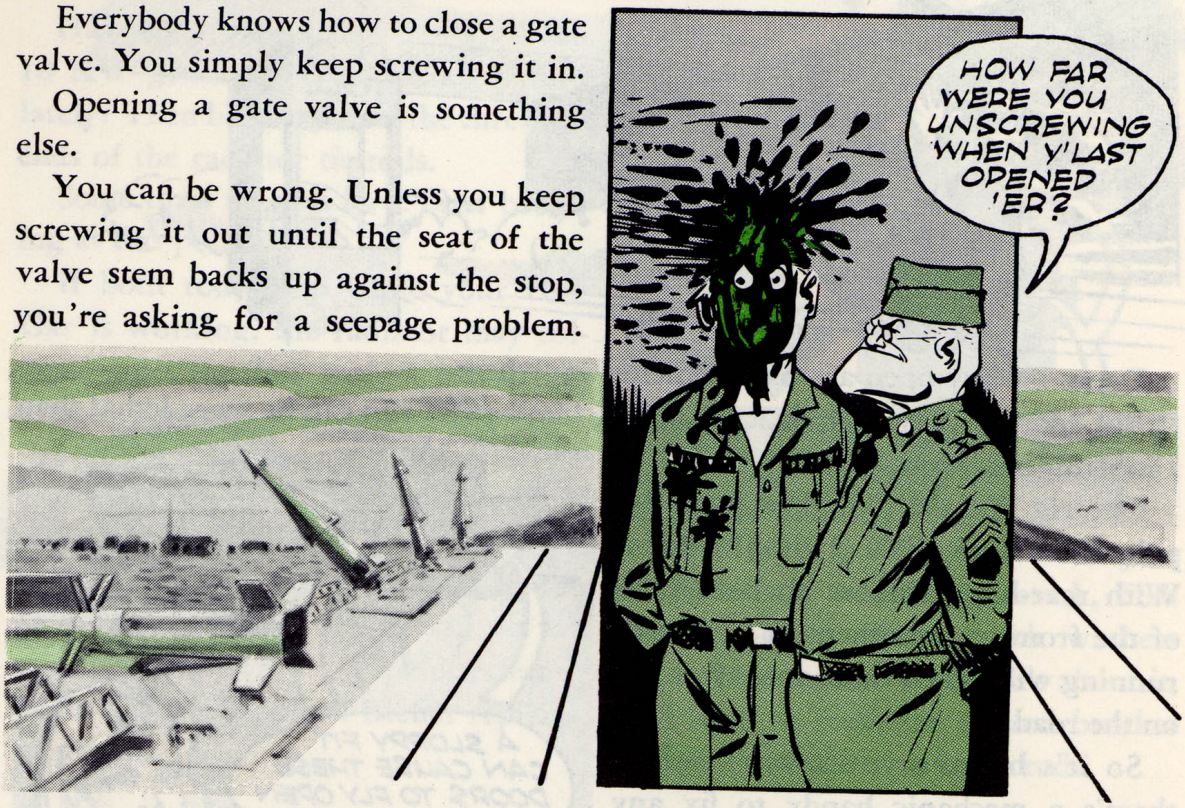


WEAK HANDS—WEEPY VALVES

Everybody knows how to close a gate valve. You simply keep screwing it in.

Opening a gate valve is something else.

You can be wrong. Unless you keep screwing it out until the seat of the valve stem backs up against the stop, you're asking for a seepage problem.



Take the shutoff valve that sits right over the V-belt on the No. 1 motor at Nike elevators, f'rinstance.

When you open that valve only part way, leaving all the pressure on the packing, it's likely to seep all over the V-belt. That seeping oil not only fouls the belt, it gets thrown all over the area every time the motor starts.

No doubt about it. It's always easier to do a job right the first time. Even on a little job like opening a gate valve, a couple of more turns can save you a mess of wiping and explaining.

ELBOW BENDER

You say your Waukesha 6NKDBS-EU1 generator suffers from droopy fuel pump pressure? Could be caused by excess elbow-bending—in the fuel supply line, that is.

Better count those elbows, before you cuss the pump.

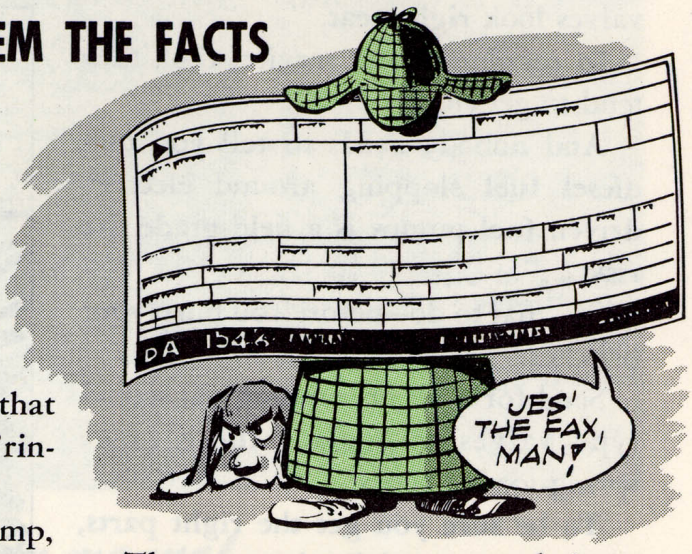
If the fuel supply line has more than three elbows, you've got a Goldberg plumbing plan—which overloads the transfer pump.

Your support people can goose the fuel pressure, for now, by pulling the fuel relief valve and replacing its standard spring with high-tension spring number (01843) SP7961 (Eng).

But hang onto that original spring.

It must go back into the relief valve, as soon as your fuel supply line is corrected to the 3-elbow hookup required by installation drawings.

GIVE 'EM THE FACTS



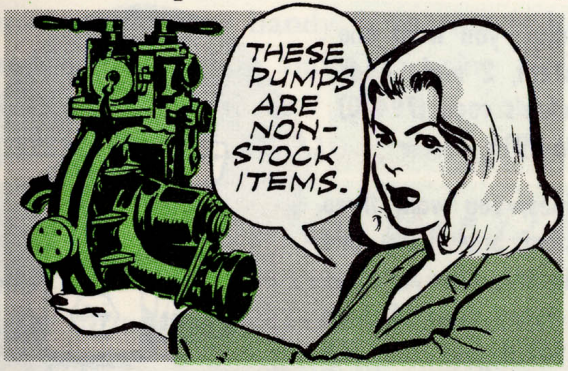
Quiz games may be fun at parties or on TV.

But, don't play guessing games with your supply people. If they guess wrong—the joke's on you.

Be accurate and complete when you fill out your DA Form 1546's.

Take the requisitions for pumps that you mount on fire trucks, as a f'rinstance.

The pumps go by: Centrifugal pump, fire truck mounting, front, one 4½-in inlet, two 2½-in outlets, threaded, 500 GPM (250 per outlet) at 276 ft. head,

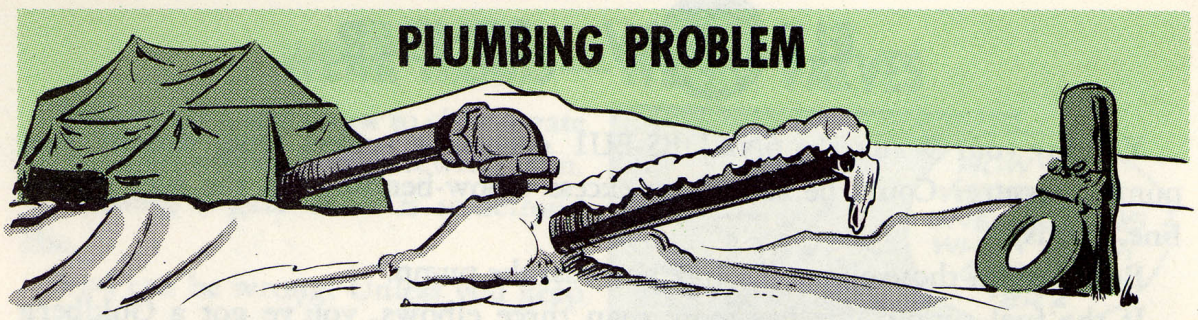


and are covered by FSN's 4320-289-3679, 4320-288-8016, 4320-378-1625.

These pumps are non-stock items which are bought on demand based on the needs of specific trucks. So when you submit your requisition to the Engineer Supply Control Office in St. Louis, be sure you include the make, model, and serial number of the truck it's going on—in addition to the complete nomenclature and FSN for the pump you want.

Give 'em the facts . . . all the facts—it'll help speed up delivery and you'll be sure of getting the right pump mated with the right truck.

PLUMBING PROBLEM



Amongst the heater-line plumbing on a winterized 4D Huber-Warco grader, you find four—count 'em—four fuel shutoff valves.

One main valve under the tank, and one for each heater.

Being spring-loaded types, those valves look right neat.

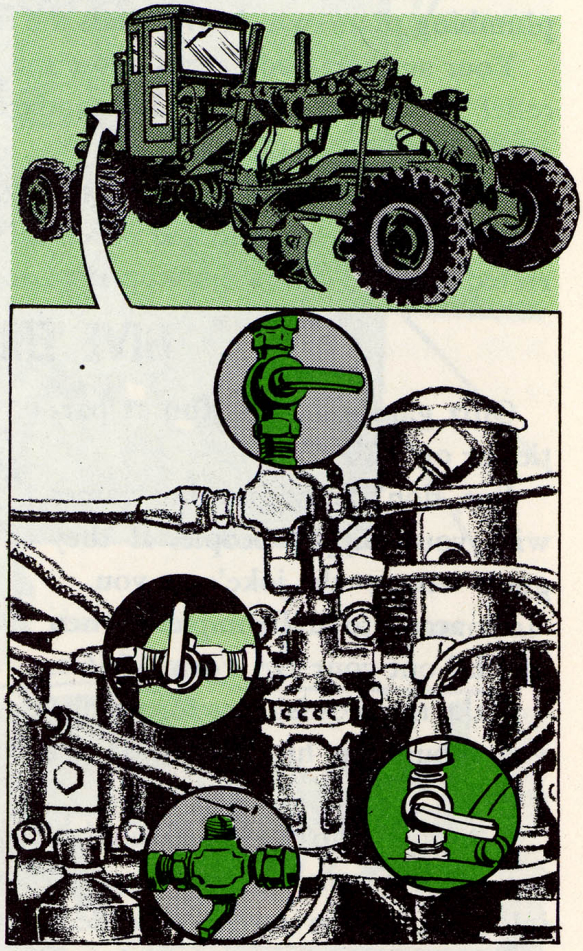
In regular winter service, tho', they tend to get sloppy.

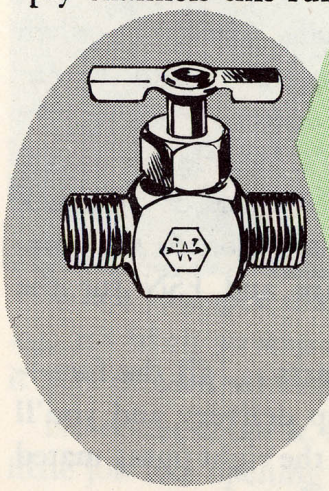
And nobody needs to tell you that diesel fuel slopping around electric-driven fuel pumps is a field-grade fire risk.

So what to do—before you burn your britches?

Send for a set of common old screw-type valves to replace those fancy spring-loaded types.

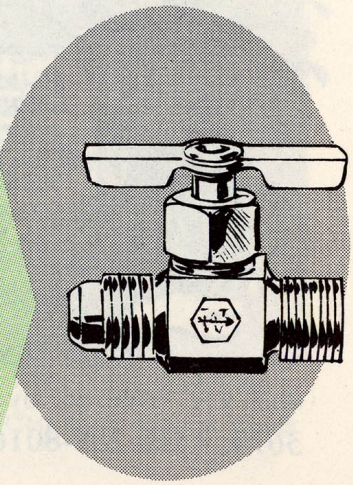
To be sure you get the right parts, give your normal Engineer parts supply channels this full description—





For the main shutoff valve, you want one Cock, shutoff, screw stem, 2 male ends threaded 1/8-in NPT, maker's code (79470) part 6810, FSN 4820-396-0915.

And for the heater lines, you want three Cocks, shutoff, screw stem, brass body, one male end threaded 1/8-in NPT, other male end threaded regular flare type, 1/4-in OD tube size, maker's code (79470) part 530, FSN 4820-254-8640.



PUBS

A selected list of recent publications of interest to Organizational Maintenance Personnel. This is a list compiled from recent Adjutant General's Distribution Center Bulletins. For complete details see DA Pam 310-4 with latest changes.

TECHNICAL MANUALS

TM 1-1U-1A-4-20P Sep.
TM 3-1040-221-12 Sep Service Kit, Portable Flame Thrower Riot Control Agent Dispenser M27.
TM 3-4240-236-20P Sep Filter Unit, Gas-Particulate, Tank 12CFM, M8A3.
TM 3-6665-210-12 Sep Alarm, Vg-Agent, Automatic Field, E41R3.
TM 5-2805-204-14 Sep Engine, Gas, Military Standard Models.
TM 5-3431-201-20 Sep Welding Machine, ARC: Generator.
TM 5-3805-210-20 Sep Grader, Road, Huber-Warco Model 4D.
TM 5-6125-202-10 Oct Nike-Ajax, Nike-Hercules.
TM 9-500 Sep Ord Corps Equip Data Sheets.
TM 9-1055-212-12 Sep Little John.
TM 9-1005-240-12 Sep Twin Cal., 30 M G, Hel Arm Subsystem XM1 & XM1EL.
TM 9-1430-250-20P/7/2 Sep Nike-Hercules.
TM 9-1430-510-20P/1 Sep Hawk.
TM 9-1430-511-20P/1 Sep Hawk, Ground Con Equip.
TM 9-1440-500-20P/1 Sep Hawk.
TM 9-2350-217-10 Sep How SP 105mm T19E1; 155mm T196E1.
TM 9-4935-404-14/6 Oct LaCrosse, Test Equip.
TM 10-500-13-3 Sep Rigging M101, ¾-Ton Cargo Trailer.
TM 10-3930-222-10 Sep Truck, Lift, Fork, Army Model MHE178.
TM 10-4540-201-24P Oct Heater, Immersion Liquid Fuel Fired.
TM 10-8465-203-25P Oct Container & Harness Assembly, Parachutist's.
TM 11-5805-275-20P Sep Repeater Telephones AN/TCC-5 & AN/TCC-22.
TM 11-5820-224-20P Sep Radio Sets AN/VRC-6, -6X, -6Y, -6Z, -6XX & -6YY.
TM 11-5820-490-25P Sep Radio Set AN/SRC-8BZ.
TM 11-5821-202-20P Oct (ARC-59).
TM 11-5895-313-20P Oct Amplifier, Video AM-549/MTQ-1.
TM 11-5965-265-13P Sep Microphone, Dynamic M-80/U.
TM 11-6125-201-12P Sep Dynamotors, Power Supply DY-93/G, DY-93A/G, DY-98/G, and DY-100/U.
TM 11-6625-522-15 Aug Test Set 1-76, Test Oscillators BC-376A, -B, -C, -D, -E, -F, -G, -H and K and Test Indicators BE-67, -A, and C.
TM 11-6625-529-12 Sep Simulators, Infrared Signals, AN/AAM-14 & AN/TAM-2.
TM 11-6625-530-12 Sep Simulator, Test Signals AN/TAM-1.
TM 11-6660-231-20P Oct Recorders, Wind Direction and Speed RO-2/GMQ, RO-2A/GMQ, RO-2B/GMQ, and RO-2C/GMQ.
TM 11-6720-214-12 Oct (O-1).
TM 11-6720-217-12 Oct (OV-1).
TM 55-450-4 Oct (OH-13).
TM 55-450-5 Oct (OH-23).
TM 55-1510-206-20 Aug (CV-2).
TM 55-1510-206-20P Sep (CV-2).
TM 55-1520-201-20P Sep (UH-19).
TM 55-1520-205-20P Sep (CH-21).

MODIFICATION WORK ORDERS

MWO 9-4935-253-20/2 Oct Nike-Hercules, Test Equip.
MWO 55-1510-204-34/4 Oct (OV-1).
MWO 55-1510-204-34/50 Oct (OV-1).
MWO 55-1510-206-34/25 Sep (CV-2).

TECHNICAL BULLETINS

TB AVN 23-16 Sep Test Flights.
TB AVN 23-34 Sep QCA's and Kits.
TB AVN 23-48 Sep Restricted Use of Elec Tests on A/C w/fuel.
TB AVN 23-60 Oct (Flt Simulator Devices).
TB AVN 23-65 Oct (A/C Condition Components).
TB ENG 320 Aug Dryer, Aggregate, Barber-Greene Model 830.
TB SIG 356 Aug.
TB 9-1430-501-12/1 Sep Hawk.
TB 9-2320-212-20/2 Oct Truck M37, M37B1, Installing 100 Amp Batteries.

MISCELLANEOUS

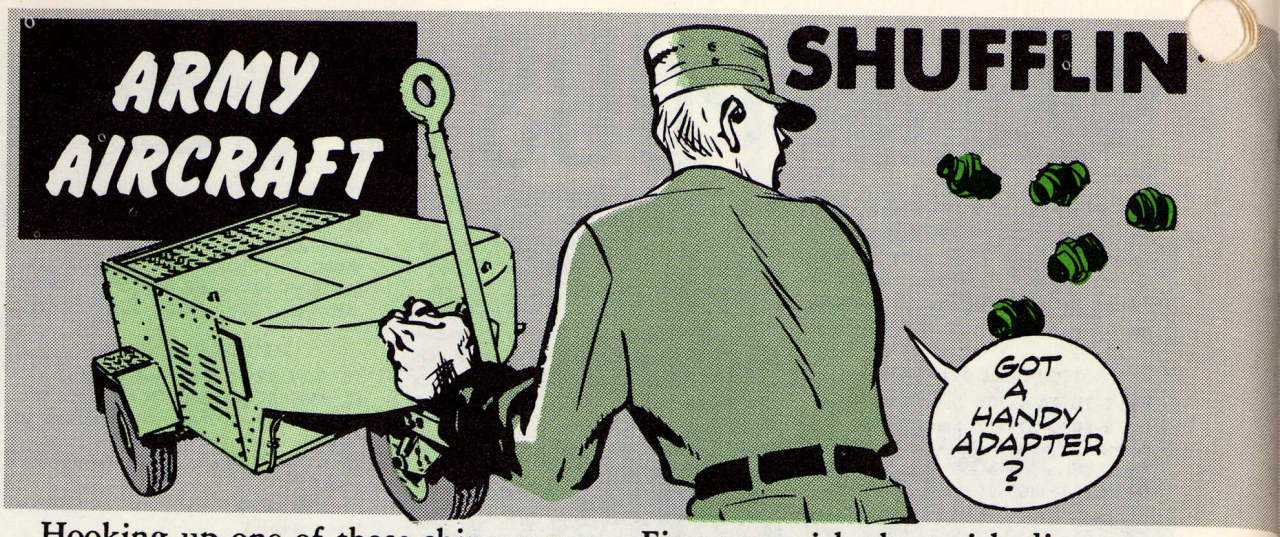
DA Form 12-31 Nov Req for ID of Army Avn Pubs.
LO 9-2350-224-10 Oct Tank M48A3.
SB 1-15-9 Sep Modification Kits.
SB 5-111 Sep Extinguishers, Fire.
SB 11-550 Oct Conversion of Tool Equip TK-27/GF to Tool Kit TK-116/GF.
SIG 7&8 C-2458/FSG-1 Oct.
SIG 7&8 MD-328/FSG-1 Sep.
SIG 7&8 MX-2335/G Sep Amplifier-Synchronizer Unit Sub-Assembly MX-2335/G.
SIG 7&8 MX-2443/FSG-1 Sep.
SIG 7&8 OA-1781/FSG-1 Sep.
SIG 7&8 Oct Power Supply PP-1988/FSG-1.
SM 10-1-C6-17-SL Nov FSC Group 79 Cleaning Equip and Supplies.
TA 55-7 Oct BD Type vessels.

Handy manual

Got cleaning problems with Ordnance equipment in your outfit? Like what to use? What it does? What technical service has it? Latch on to TM 9-247, a manual that's as handy as its title is long, "Materials Used for Cleaning, Preserving, Abrading and Cementing Ordnance Material; And Related Materials Including Chemicals." Quote the need-to-know basis spelled out in Change 4, paragraph 41b, AR 310-1, when you order the TM.

Use that DA form 2028

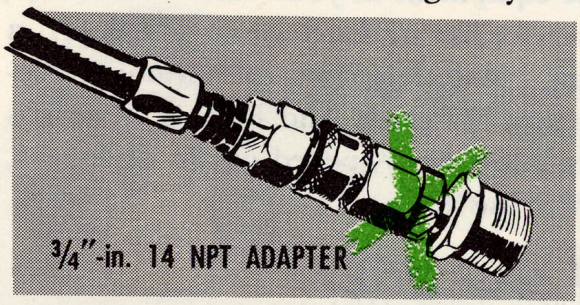
It's been said before—and it'll probably be said again—DA Form 2028 is the only form to use to keep all publications on the straight and narrow. The form goes by the long handle of "Recommended Changes to DA Technical Manual Parts Lists or Supply Manual 7, 8, or 9." But, long or short title, it's what you use to recommend changes, additions and deletions to all technical pubs.



Hooking up one of those shiny new preoilers to a bird engine is a slick deal. You just pop an adapter into the quick disconnect and you're 'bout ready to shoot the works.

'Course when an adapter is the wrong size, that's when you get the chance to show your stuff, by shuffling them around until you find one that fits your engine.

Take the 28-volt Preoiler and Pickler, FSN 4920-473-7060. She has a No. 2 adapter that's supposed to hook up to the oil pressure gage connection in an Otter (U-1A) R-1340 engine. There's only one problem—the ¾-in -14 NPT adapter was not meant for an Army R-1340 engine . . . it's a mile too big. By the

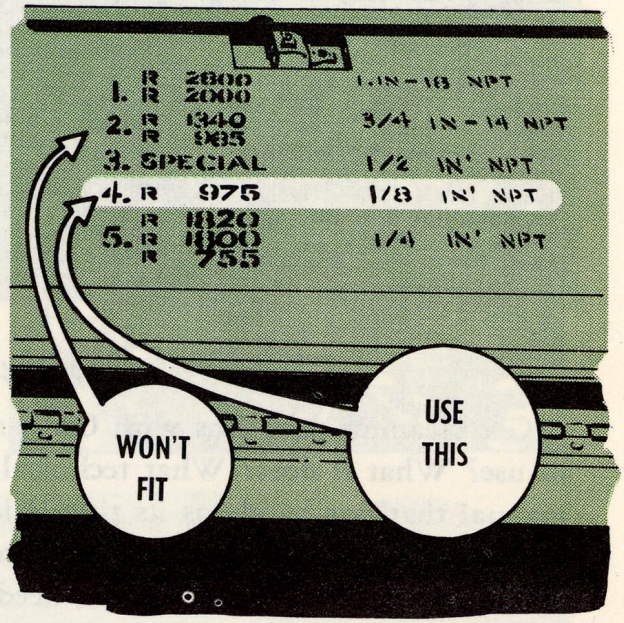


way, the very same problem exists with the Beaver, L1-6A, R-985 engine.

But you can make the marriage between your preoiler and engine easy enough.

First you pick the quick disconnect with the ¼-in NPT male, and connect it to your hose line.

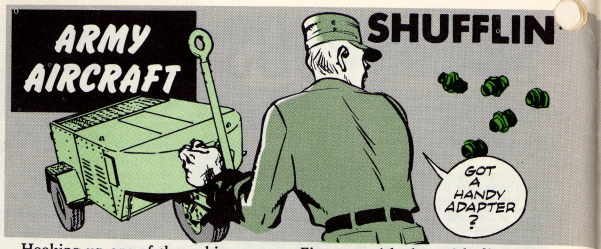
Then you connect the No. 4 adapter, which has a ¼-in NPT female and ⅛-in NPT male thread, onto the end of your hose. (If you should happen to



get some leakage at this joint when you actually preoil, you can overcome it by just adding a ¼ x ¼-in standard male-female fitting between the quick disconnect and the No. 4 adapter.)

Next, you disconnect the oil pressure gage line—not the easy way at the engine firewall, but the right way, at the

ARMY AIRCRAFT SHUFFLIN' ADAPTERS



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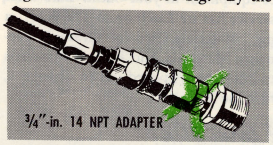

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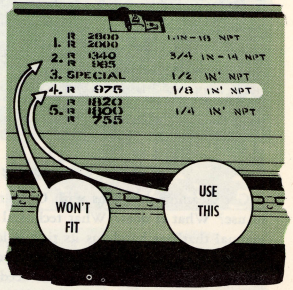
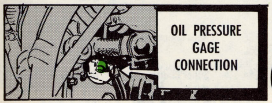


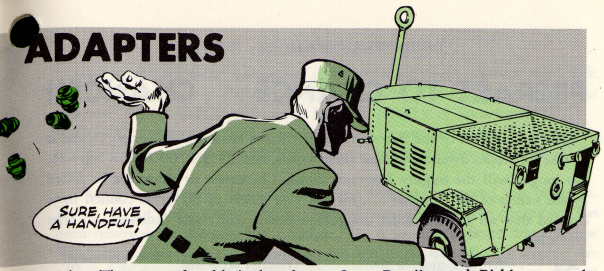
Next, you disconnect the oil pressure gage line—not the easy way at the engine firewall, but the right way, at the engine. The reason for this is that the pressure gage line elbow has a small orifice so it wants to be taken out of the engine. You know what a small opening can mean—less oil to the engine and improper preoiling!



With the elbow out the ⅛-in NPT male fitting, on the preoiler hose, threads neatly into the ⅛-in female thread in the Otter engine.

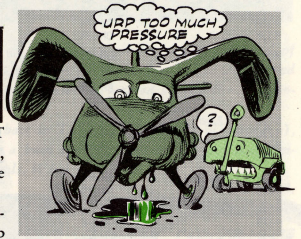
But before you hook up to the engine remember that you want to pump oil, not air, into the engine. Right? So be sure your oil supply line is filled with oil—natch.

When you're hooked up to your R-1340, or any engine for that matter, you want to check the bird's maintenance manual to get the right preoiling pressure.



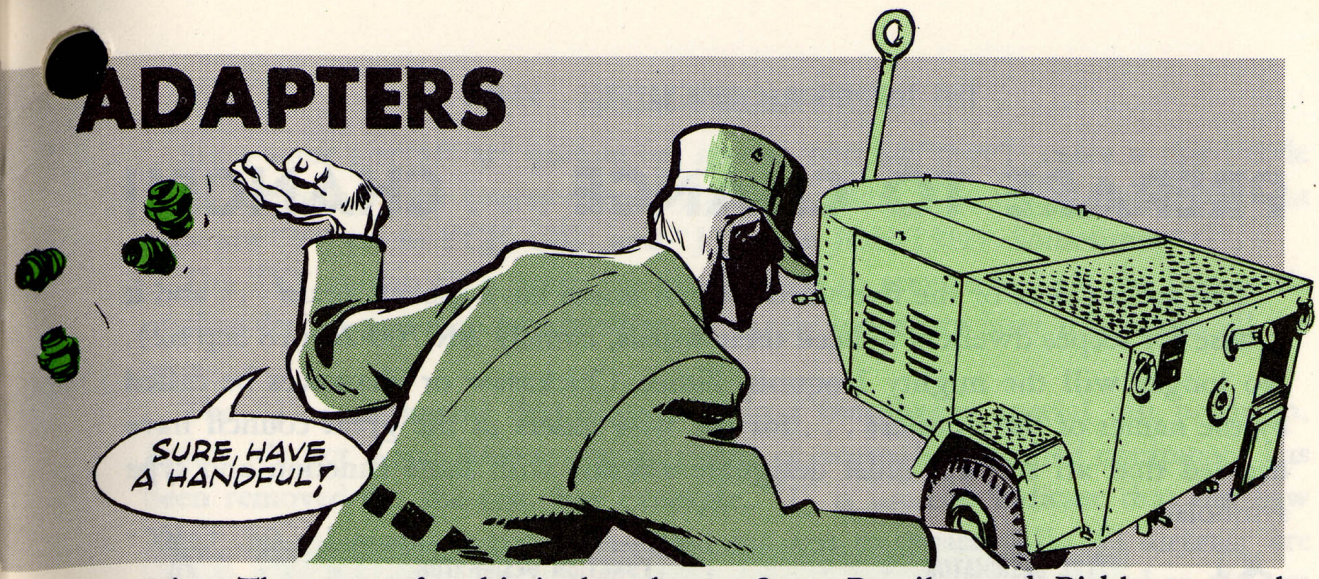
Sure, Preoiler and Pickler manual TM 55-4920-225-15 (2 Mar 62), page 13, paragraph 20, says the normal pressure is 200 PSI . . . normal for what engine?

Use that kind of pressure on your Otter and she'll likely as not blow her seals and leak like a sieve. TM 1-1U-1A-2 (21 Jun 60) has the right pressure for your Otter . . . 45-60 PSI.



Preoiling pressure varies widely from one engine to another. So how do you regulate the pressure?

Easy. Just turn the adjustable relief valve on the preoiler until you get the pressure your bird needs, like TM 55-4920-225-15 says on page 13. Then shoot the works.



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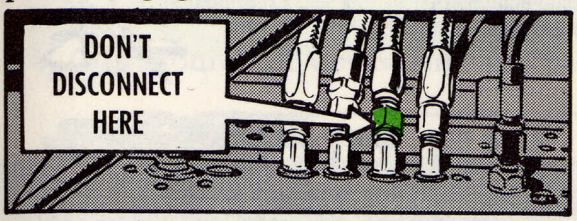

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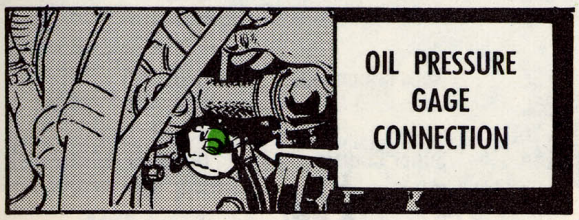

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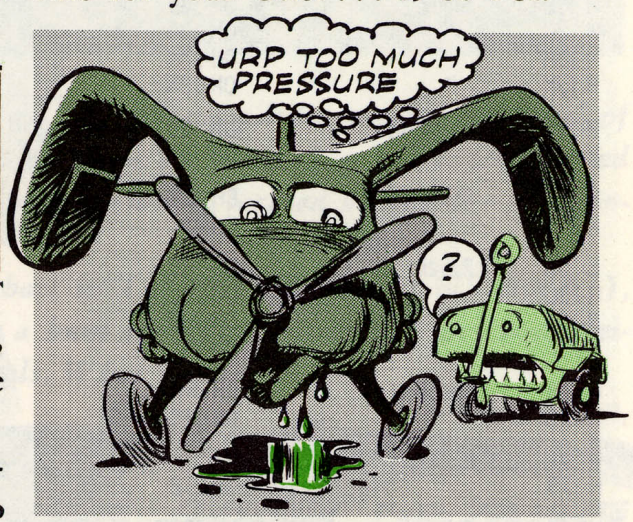

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PREPARE TO CHANGE . . . CHANGE!!

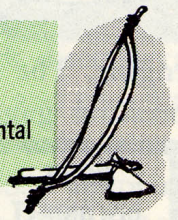
The great chiefs of the five-sided council house have spoken again . . . and it it wise for teepee dwellers to heed their words, namely AR 700-26 (18 Sep 62). No longer will the mighty Iroquois, Sioux, Chickasaw or Shawnees be called by the names of their fathers . . . for the wise elders of the great council have decided that all services must designate aircraft with same function and type symbols:

TYPE DESIGNATOR

H = Helicopter
O = Observation
U = Utility
V = VTOL and/or STOL

FUNCTION DESIGNATOR

C = Cargo/Transport
O = Observation
R = Recon-equipment on board
T = Trainer
U = Utility
X = Experimental



HELICOPTER SERIES

OLD	NAME	NEW
HU-1	Iroquois	UH-1
HU-1A	"	UH-1A
HU-1B	"	UH-1B
HU-1D	"	UH-1D
H-13E	Sioux	OH-13E
H-13G	"	OH-13G
H-13H	"	OH-13H
H-13K	"	OH-13K
H-19C	Chickasaw	UH-19C
H-19D	"	UH-19D
H-21B	Shawnee	CH-21B
H-21C	"	CH-21C
H-23B	Raven	OH-23B
H-23C	"	OH-23C
H-23D	"	OH-23D
H-23F	"	OH-23F
H-34A	Choctaw	CH-34A
H-34C	"	CH-34C
H-37A	Mojave	CH-37A
H-37B	"	CH-37B
HC-1A	Chinook	CH-46C
HC-1B	"	CH-47A
YHC-1B	"	YCH-49B
HO-4	(under development)	OH-4A
HO-5	" "	OH-5A
HO-6	" "	OH-6A

OBSERVATION SERIES

OLD	NAME	NEW
L-19A	Bird Dog	O-1A
TL-19D	" "	TO-1D
L-19E	" "	O-1E

UTILITY SERIES

OLD	NAME	NEW
U-1A	Otter	U-1A (fits right in)
L-20A	Beaver	U-6A
L-23D	Seminole	U-8D
RL-23D	"	RU-8D
L-23E	"	U-8E
L-23F	"	U-8F
L-26B	Aero Commander	U-9B
L-26C	" "	U-9C
RL-26D	" "	RU-9D
L-28A	Super Courier	U-10A (AF & Army use)

VTOL/STOL SERIES

OLD	NAME	NEW
AO-1A	Mohawk	OV-1A
AO-1B	"	OV-1B
AO-1C	"	OV-1C
AC-1	Caribou	CV-2A
AC-1A	"	CV-2B
None	Not named	XV-3A
VZ-10	" "	XV-4A
VZ-11	" "	XV-5A
VZ-12	" "	XV-6A
AC-2	" "	CV-7A

SPECIAL DESIGNATIONS

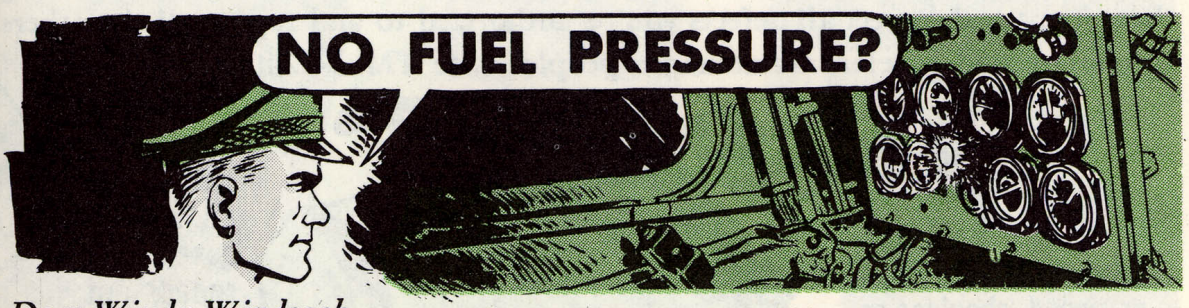
Since some aircraft are unique for special reasons, they'll carry a third code letter in front of the function and type designators. The ones being used right now are "Y" (as in YCH-49B) and "J" (as in JOH-13H). Sometimes "G".

The "Y" means it's a prototype being used to service test all the potentials of that design and may be added to the Army inventory later if it passes all the tests.

The "J" code means that aircraft is in a **temporary** special test program. Either it's got a special test configuration or normally installed equipment has been removed for the test. For example, "J" is used to indicate that the new XM1 .30 cal machine gun is installed for test purposes. All "J" aircraft are returned to the original, or a standard operational, configuration when the test is finished.

The "G" stands for **permanently grounded**—such as school training aids.

Clip around the dotted line and paste this in your helmet liner or fatigue cap.

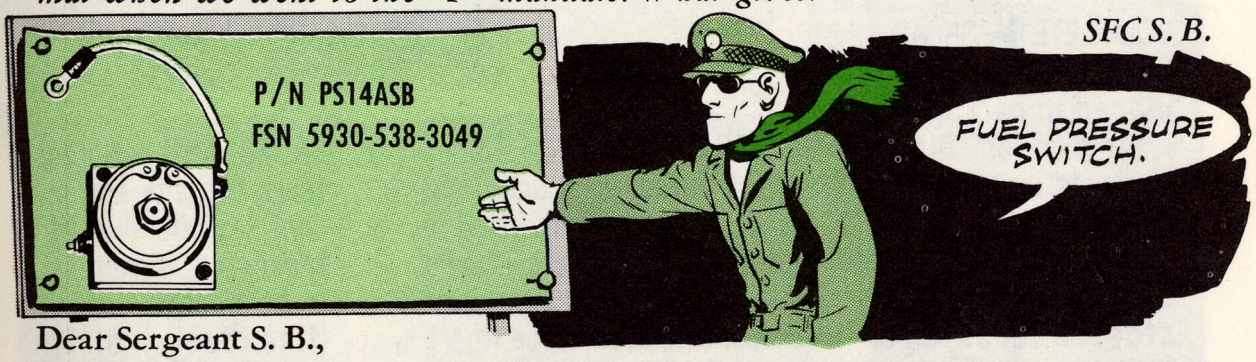


Dear Windy Windsock,

The fuel pressure warning light on the student pilot's instrument panel of our Bird Dog (TL-19D) wouldn't go off when we cranked 'er up. So we checked out the system and found the fuel pressure switch, located behind the front instrument panel, was leaking fuel.

Although the trouble shooting chart in TM 55-1510-202-20 (19 Apr 61), Chapter 2, page 9-27, says to replace a bum switch, there wasn't any such animal when we went to the "P" manuals. What gives?

SFC S. B.



Dear Sergeant S. B.,

Keep an eye peeled for the latest TM 55-1510-202-20P, Sarge. In it you'll find fuel pressure switch, P/N PS14ASB, listed under FSN 5930-538-3049 . . . that's the baby you want.

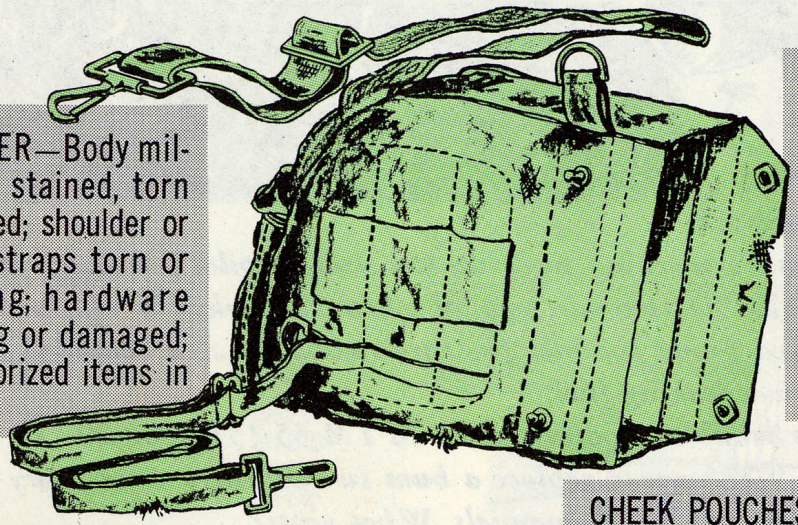
Windy Windsock

YOUR M17

Maybe you're in an outfit that's been issued the M17 field protective mask. If you have, then you will want to know how to care for it.

This mask was designed to protect your face, eyes and respiratory tract from CBR agents—either gas or aerosols. You're not supposed to use it for protection against ammonia or carbon monoxide, nor can you use it where there isn't enough oxygen to keep you alive.

You'll want to check to make sure your mask is in good condition . . . so check these items and correct all defects you're authorized to and report all the others to your second echelon maintenance people. (See TM 3-4240-202-15.)



CARRIER—Body mildewed, stained, torn or ripped; shoulder or waist straps torn or missing; hardware missing or damaged; unauthorized items in carrier.

TAB ASSEMBLIES—Clip and buckle assemblies corroded; not fastened to tabs; cuts or tears which might cause tab to pull out of faceblank.

CHEEK POUCHES—Dirty, contains foreign matter; not fastened by two flap buttons.

COMPLETE MASK ASSEMBLY—Mask not placed in carrier in right position; filter elements in mask not buttoned in pouches; chin portion of nosecup tucked into chin stop of faceblank (causes perspiration to run into filters and ruins them).

FILTER ELEMENT ASSEMBLIES—Not fitted in pouch right way; connectors not fitted in facepiece the way they should be; connector flange out of shape; connector loose where it fits to filter; mesh screening torn; edge seal broken or cut; filter element wet.

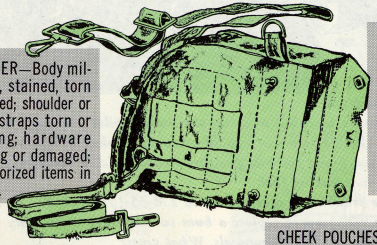
FACEBLANK—Holes, tears, or splits; permanent set affecting fit; tackiness, hardness, or brittleness; dry rot (fine cracks); dirty, moldy; deflector tubes blocked; temple pins lost.

YOUR M17 FIELD PROTECTIVE MASK

Maybe you're in an outfit that's been issued the M17 field protective mask. If you have, then you will want to know how to care for it.

This mask was designed to protect your face, eyes and respiratory tract from CBR agents—either gas or aerosols. You're not supposed to use it for protection against ammonia or carbon monoxide, nor can you use it where there isn't enough oxygen to keep you alive.

You'll want to check to make sure your mask is in good condition . . . so check these items and correct all defects you're authorized to and report all the others to your second echelon maintenance people. (See TM 3-4240-202-15.)



CARRIER—Body mildewed, stained, torn or ripped; shoulder or waist straps torn or missing; hardware missing or damaged; unauthorized items in carrier.

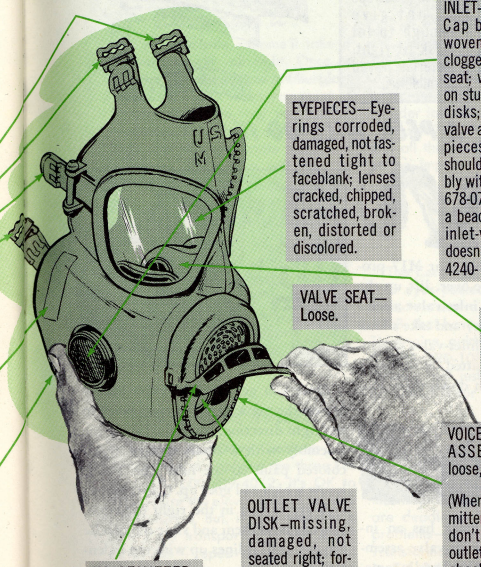
COMPLETE MASK ASSEMBLY—Mask not placed in carrier in right position; filter elements in mask not buttoned in pouches; chin portion of nosecup tucked into chin stop of faceblank (causes perspiration to run into filters and ruins them).

FILTER ELEMENT ASSEMBLIES—Not fitted in pouch right way; connectors not fitted in facepiece the way they should be; connector flange out of shape; connector loose where it fits to filter; mesh screening torn; edge seal broken or cut; filter element wet.

FACEBLANK—Holes, tears, or splits; permanent set affecting fit; tackiness, hardness, or brittleness; dry rot (fine cracks); dirty, moldy; deflector tubes blocked; temple pins lost.

CHEEK POUCHES—Dirty, contains foreign matter; not fastened by two flap buttons.

TAB ASSEMBLIES—Clip and buckle assemblies corroded; not fastened to tabs; cuts or tears which might cause tab to pull out of faceblank.



EYEPIECES—Eyerings corroded, damaged, not fastened tight to faceblank; lenses cracked, chipped, scratched, broken, distorted or discolored.

INLET-VALVE ASSEMBLIES—Cap broken or damaged; woven part of cap dirty or clogged; damaged inlet-valve seat; valve disks not in place on studs; damaged inlet-valve disks; wrong type of inlet-valve assembly on mask. Facepieces with smooth collars should have inlet-valve assembly with lifting tab (FSN 4240-678-0730); facepieces having a bead around the collar use inlet-valve assembly that doesn't have lifting tab (FSN 4240-893-3697).

VALVE SEAT—Loose.

NOSECUP—Crimping ring not fastened to faceblank right; flap buttons not fastened.

VOICEMITTER-OUTLET VALVE ASSEMBLY—Dirty, parts loose, out of shape, corroded.

(When you check the voicemitter-outlet valve assembly don't take the voicemitter-outlet valve cover off. You can check by raising the lower part of the cover without taking it off past the two studs which attach it to the voicemitter-outlet valve frame.)

OUTLET VALVE DISK—missing, damaged, not seated right; foreign matter present.

VOICEMITTER-OUTLET VALVE COVER—Cracked, torn, or broken; stiff, out of shape.

FIELD PROTECTIVE MASK

INLET-VALVE ASSEMBLIES—Cap broken or damaged; woven part of cap dirty or clogged; damaged inlet-valve seat; valve disks not in place on studs; damaged inlet-valve disks; wrong type of inlet-valve assembly on mask. Facepieces with smooth collars should have inlet-valve assembly with lifting tab (FSN 4240-678-0730); facepieces having a bead around the collar use inlet-valve assembly that doesn't have lifting tab (FSN 4240-893-3697).

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VALVE SEAT—Loose.

NOSECUP — Crimping ring not fastened to faceblank right; flap buttons not fastened.

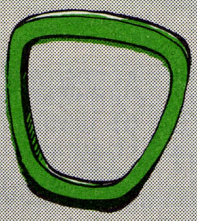
VOICEMITTER-OUTLET VALVE ASSEMBLY—Dirty, parts loose, out of shape, corroded.

(When you check the voicemitter-outlet valve assembly don't take the voicemitter-outlet valve cover off. You can check by raising the lower part of the cover without taking it off past the two studs which attach it to the voicemitter-outlet valve frame.)

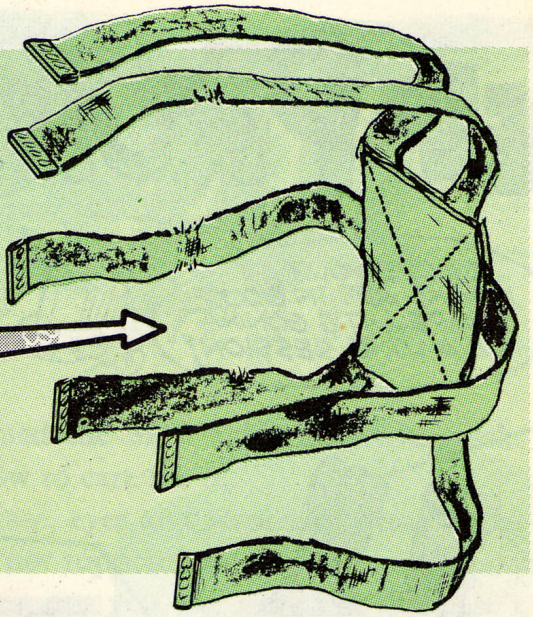
OUTLET VALVE DISK—missing, damaged, not seated right; foreign matter present.

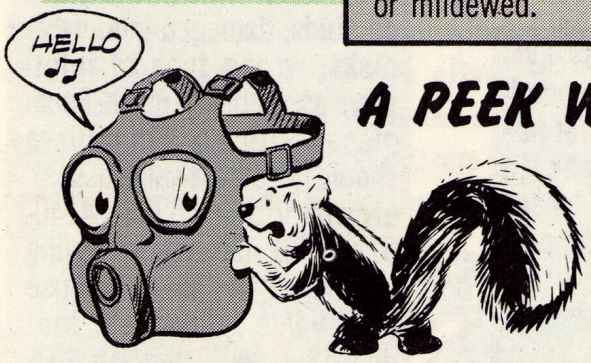
VOICEMITTER-OUTLET VALVE COVER—Cracked, torn, or broken; stiff, out of shape.

OUTSERTS — Lenses loose in rubber aprons, cracked, chipped, scratched, broken, distorted or discolored; rubber aprons tacky, torn, stiff, cracked.



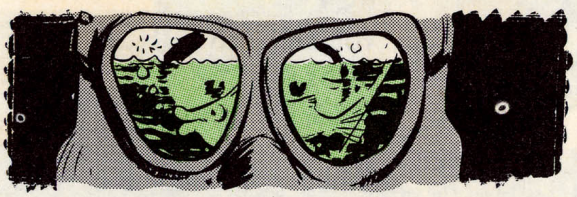
HEAD HARNESS — Broken, straps missing, straps do not give enough to let mask fit right; material frayed or mildewed.



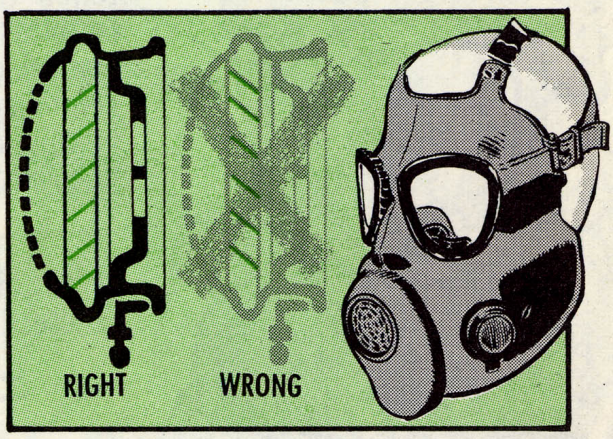


A PEEK WILL DO IT

When you're giving your M17 protective mask the once-over, lift up the valve disk inside the inlet-valve assembly (ones with handle) and take a look at the louvers. The inlet-valve assembly's supposed to be fitted on the mask so the rain won't run down those louvers into the filter.



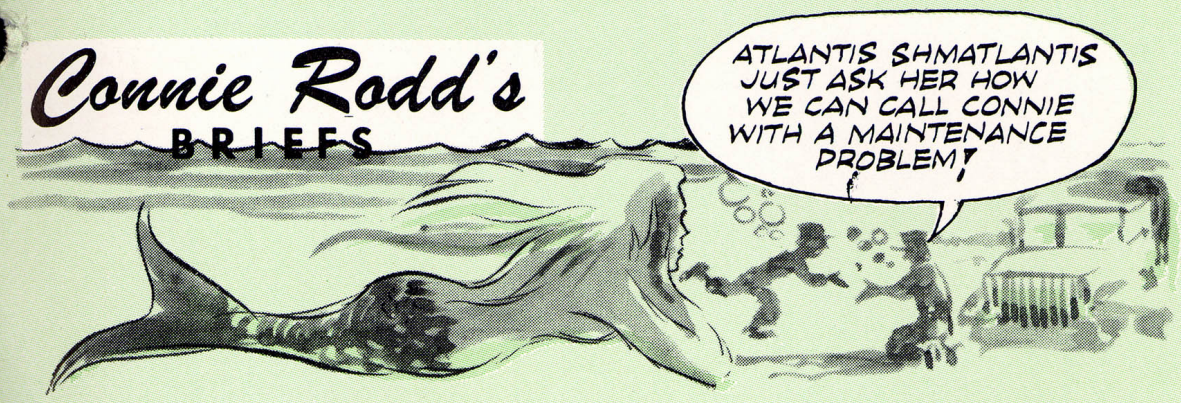
Even though the mask has an indented place for the inlet-valve assembly handle to fit into, that handle sometimes gets turned around in relation to the louvers so that even with the handle in the right place, the louvers can be turned wrong.



Once you get the inlet-valve assembly on the mask so the louvers point in the right direction, mark the top of the assembly with a small spot of light-colored paint so the next time you'll know which end goes up. Once the louvers are turned in the right direction, you can hold them and slide the handle around until it lines up with the indentation.

As it tells you in change 1 to TM 3-4240-202-15, late models of the inlet-valve assembly are marked with the word TOP, and don't have a handle.

Connie Rodd's BRIEFS



Easy does it

Your Hawk missile radome'll take a lot of hard knocks, all right. Once in awhile, tho, a ragged piece of fiberglass will show up. That's when you want to be careful about the way you handle the radome. The fiberglass could get through your skin and cause trouble. If this happens, the medics will want to see you.

Lock that needle

The handiest little warning decals to come along in a month of Sundays are spelled out in SB 9-202 (Aug 61). The decals—stuck on the M1 aiming circle and its M6A1 or M25 carrying case—remind you to lock the compass needle when you're not using it, so it doesn't get busted.

Hold your horses

Or rather your Davy Crocketts . . . when it comes to applying the three kits in MWO 9-1000-209-40/2. It's OK to use the kits for the elevating and traversing gear boxes. But, if your weapon is going to be transported in the M113 APC, do not — repeat **do not** — mount the XM77 37-mm spotting gun on the XM64E2 gun tube until after you've applied the upcoming MWO 9-2300-224-30/4 to the carrier.

Blown cylinder

Anytime you air types have an R-1300-3 series engine that's blown her top the engineers want to know about it pronto—no matter what caused the cylinder failure. Just fire off an EIR (DA Form 2407) giving the cylinder number and all the other info you have. Could be an improved jug'll come out of a study now in the works!

Bad guides

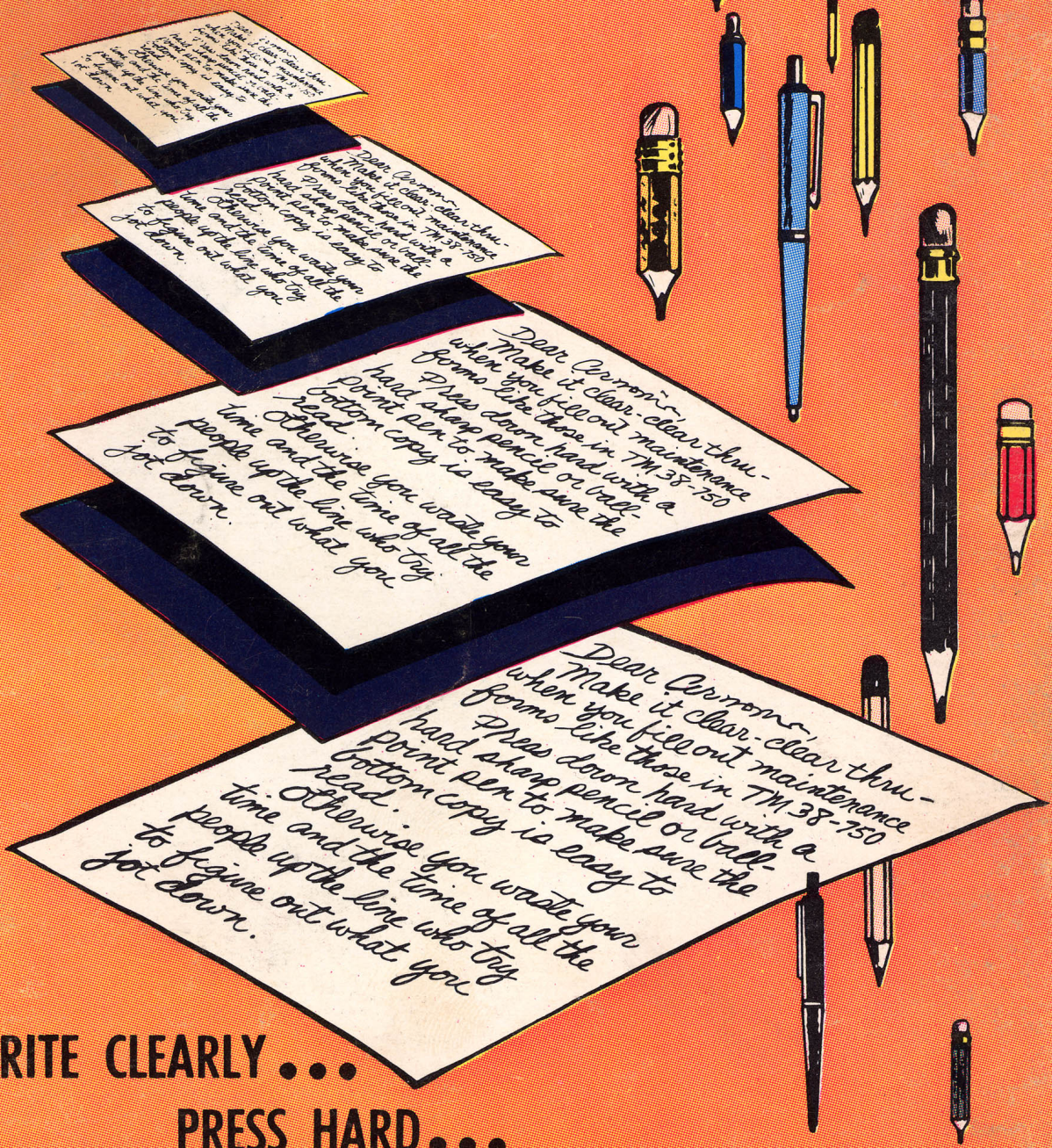
The Corporal your baby? If so, keep your eyes peeled for a batch of faulty jackscrew sleeve guides, FSN 1440-614-3308, that have slipped into the system. Thirty-nine guides procured under DA 01-021-ORD-10817 have wrong sized threads that just won't work and must be turned in for replacement.

Spread this word

If any of the M31 or M31A1 trainfire mechanisms you're supposed to be using are deadlined because of transformer problems—pass this word up the line. Transformer, FSN 5950-715-9350, listed in TM 9-6920-203-34P (Aug 60) is a booboo. Transformer, FSN 6920-600-1479, is the right one for both mechanisms and is now available in supply.

Would You Stake Your Life on the Condition of Your Equipment?

CLEAN CLEAR THRU



WRITE CLEARLY...

PRESS HARD...

AND GIVE ALL THE INFO...

ON YOUR MAINTENANCE FORMS.